TECHNOLOGY DEPARTMENT

NEW EQUIPMENT DIGEST

A PENTON PUBLICATION

EQUIPMENT • IMPROVEMENTS • PROCESSES • MATERIALS • METHODS • APPLICATIONS • LITERATURE

Vol. 13 July, 1948 No.

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JUL 16 1948
DETROIT

TIME SWITCH

Designed for 'on-off' timing of single circuit, type T-47 time switch operates automatically during 24-hour period and will continue preset cycle without adjustment. It is driven by permanently lubricated 115 or 230-volt alternating current Telechron synchronous motor, and contacts are rated at 35 amperes on 230-volt alternating current. Equipped with large 24-hour clock dial, unit is read and adjusted easily.

Operation can be manual or automatic as desired. Adjustable, switch-tripping clamps permanently attached to dial are used for setting switch for permanent operation. Clamps allow minimum setting at 5-minute intervals and maximum setting of 22 hours between 'on' and 'off' operation. Manual operation of either 'on' or 'off' is possible independently of automatic settings already placed on dial. Switching cycle is resumed automatically after hand operation is completed. Switch retails for $12.45. Made by **General Electric Co.**, Schenectady 5, N. Y.

▲ Mention Item **NED-4800** when writing ▲

DRAFTING MACHINE

Redesigned standard and civil engineer type Equipoise drafting machines incorporate several features which assure smoothness of operation, accuracy and unhampered speed. Mechanism permits accurate alignment at all times on drawing board, even though board is inclined as much as 20 degrees from horizontal position. Other improvements include revised protractor head assembly, relocated base line setting device for locking protractor index point to any angle and increase of distance between clamp screws. Standard Equipoise unit has 'touch-control' feature which aids mechanical, architectural and structural draftsmen. Made by **Charles Bruning Co.**, 4754-6 Montrose Ave., Chicago 41, Ill.

▲ Mention Item **NED-4801** when writing ▲

Do YOU know

■ "WHO ME?" is title of thought-provoking cartoon-illustrated 24-page booklet prepared for supervisory personnel in all types of plants. Pointers in job management are outlined which will result in better industrial relations and increased production. List price is 25 cents. Order direct from National Foremen's Institute, Inc., Deep River, Conn.

▲ Mention Item **NED-4802** when writing ▲

■ STATE LAWS affecting permissible size and weight of commercial vehicles are tabulated in 52-page "1948 Truck & Trailer Size & Weight Restrictions" booklet which is available free from Four Wheel Drive Auto Co., Clintonville, Wis.

▲ Mention Item **NED-4803** when writing ▲

■ HOW management service can be made to pay dividends in improved productivity is demonstrated in sample case study of a typical industry. Actual survey and recomendations are included in 14-page "Wage Payment Survey" which is available free. Issued by John A. Patton, Management Engineers, Inc., 176 W. Adams St., Chicago 3, Ill.

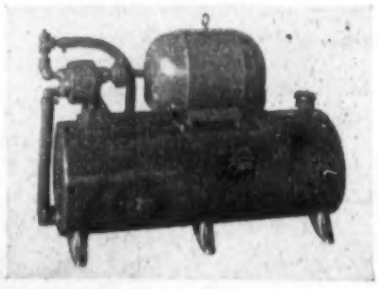
▲ Mention Item **NED-4804** when writing ▲

MAGNETIC GAS VALVE

Hermetically-sealed type K-3H magnetic gas valve opens and closes fuel supply lines in response to room thermostats, limit controls or similar devices. It is adaptable to warm air furnaces, gas-fired boilers, industrial furnaces, conversion burners and most domestic heating appliances. Safety features include diaphragm construction which seals solenoid operator positively from natural, manufactured, mixed or commercial liquefied gas handled; and valve which closes automatically upon current failure. Lever permits manual operation in event of current failure. Valve is available in sizes from ⅜ to 1¼-inch internal pipe sizes. Made by **General Controls Co.**, 801 Allen Ave., Glendale 1, Calif.

▲ Mention Item **NED-4805** when writing ▲

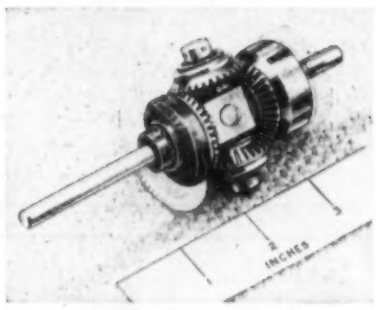
HYDRAULIC POWER UNIT



Comparatively small in size, Cubline series of hydraulic power units is suitable for wide variety of hydraulic applications involving forming, bending, pulling, lowering, etc. Individual units have 6, 10 and 15-gallon per minute capacities, and each machine consists of 35-gallon oil storage reservoir with foot mountings, electric motor, 1000-pound per square inch pump, relief valve, coupling, pipe and fittings, suction hose, and clamps. Made by **Hydraulic Press Mfg. Co.**, Hydro-Power Div., 100 Marion Rd., Mt. Gilead, O.

▲ Mention Item **NED-4806** when writing ▲

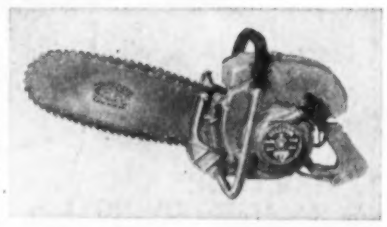
MECHANICAL DIFFERENTIAL



Available in six sizes having shaft diameters from 3/16 to 5/8-inch, this Arma mechanical differential is designed for high accuracy application. In installations where inputs are through end gears, unit will combine two rotating inputs into one rotating output which is the algebraic average of the two inputs. Units have spider and mating gears of naval bronze and stainless steel respectively. End gears are replaceable and ball bearings are used throughout. Made by **Arma Corp.**, 253 36th St., Brooklyn 32, N. Y.

▲ Mention Item **NED-4807** when writing ▲

ENGINE POWERED SAW



Powerful, lightweight One-Man chain saw operates with equal efficiency in any cutting position and is especially suitable for tree felling, bucking and limbing, and for construction timber cutting. Eighteen-inch cutting capacity is provided by two-cycle air-cooled Mercury gasoline engine which delivers 3½ horsepower at 4000 revolutions per minute. Fuel system is designed so that saw will operate even when in inverted position. Other features include automatic chain lubricator, fuel meter and amply protected crankshaft. Starting is accomplished through use of built-in self-rewinding Magnapull starter. Saw control is concentrated in pistol grip handle, and throttle is at worker's finger tip. Squeeze of handle disengages clutch and release of safety catch re-engages it. Made by **Henry Disston & Sons, Inc.**, 929 Tacony St., Philadelphia, Pa.

▲ Mention Item **NED-4808** when writing ▲

Read Carefully
CHECK AND PASS ON

✓	NAME AND TITLE	SEE ITEM NO.

TO OBTAIN

Additional information on products in this issue, use free postal reply cards which are enclosed between pages 2-3 and 66-67. Your inquiries will be forwarded promptly

ALL-PURPOSE SHOP SAW

Usable for carpentry, pattern shop, shipping, wood salvage, construction and other types of wood working operations, model GR all-purpose saw has 3-horsepower motor driving 14-inch diameter saw to cut any depth up to 4⅛ inches. Ball bearing rollers in head ride on machined tracks inside arm for easy, accurate cutting. Safety is assured through use of combination saw and dado arbor cover, and adjustable dust spout.

Head incorporates universal swivel adjustment so that wide variety of operations can be performed. Machine will serve as cut-off, rip, miter and variety saw; and by changing cutting tools, it can be used for gaining, rabbeting, shaping, grooving, etc. Made by **DeWalt, Inc.**, Dept. P, 197 Fountain Ave., Lancaster, Pa.

▲ Mention Item **NED-4809** when writing ▲

SMALL PRESSURE SWITCH

Line of small size pressure switches, designed primarily for use with motor driven water systems, can be used also with small compressors, oil pumps and other motor driven pumps on pressure systems.

One type has external range adjustment for regulating pressure on water systems to meet seasonal changes in pressure requirements. To maintain accuracy of calibration, differential adjusting screw is sealed.

Second model has no external adjustment. Instead it has slotted range adjustment screw and slotted differential adjustment screw located inside enclosing case. This switch is recommended for use where operating conditions are uniform throughout year. Made by **Cutler-Hammer, Inc.**, 574 N. Twelfth St., Milwaukee 1, Wis.

▲ Mention Item **NED-4810** when writing ▲

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THE ORIGINAL PACKAGED FLOOR—

Plastic Rock

The Sun Never Sets on Plastic Rock Floors

Throughout the world's largest industries, institutions, and transportation facilities, millions of feet of Plastic Rock are positively proving its ability to stand abuse. Plastic Rock units come proportioned accurately and packed complete in handy barrels for easy application; new floor for old in 48 hours without expensive removal of old surface. Noiseless, flame-repellent, skid-safe even when wet, dustless; no cracking, curling, crumbling, or loosening. U. L. I. field associates are at your command to advise and supervise.

Ask for Report 220-D-7.

UNITED LABORATORIES, INC.
16804 Euclid Ave. Cleveland 12, Ohio

ULI PRODUCTS AND PROCESSES for PROTECTING PROPERTY
Field Representatives All Over The World

Mention Item NED-4811 when writing

NEW "Controlled-Air-Power" ROTARY FEED TABLE

10" diameter indexing plate geared to provide 4-8-12-16 or 24 positively locked stations. Table top or indexing plate may be drilled, tapped or otherwise machined for mounting jigs and fixtures. Available with either mechanically operated or solenoid operated Bellows Air Motor. Easily synchronized to machine movement to operate automatically. Operates in any position.

The Bellows Rotary Feed Table comes complete with 6' of air hose, quick coupler and Lubro-Unit (air filter, air lubricator, air pressure regulator and gauge).

Write for Bulletin BRT-60A 923

The Bellows Co.
AKRON 9, OHIO

Mention Item NED-4812 when writing

FAIRFIELD FREEHAND GLOVES
Sold direct from our factories to you

Write for our new 1948 CATALOG and PRICES illustrating EVERYTHING IN GLOVES & MITTENS

1 Cotton Gloves and Mittens
2 Jersey Gloves and Mittens
3 Leather Palm Gloves and Mittens
4 Leather Work Gloves and Mittens
5 Rubber Dipped Gloves and Mittens

43 Years Producing Quality Work Gloves

FAIRFIELD GLOVE COMPANY
Fairfield, Iowa

Mention Item NED-4813 when writing

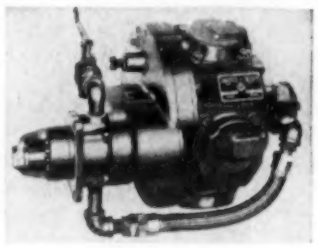
BIN LEVEL INDICATOR

Small size Bantam Bin-Dicator bin level indicator is designed for use on very small hoppers, spouts chutes, conveyors and on other applications where it is necessary to start or stop filling and emptying equipment automatically as level of material reaches designated limits. Unit is diaphragm operated switch which is enclosed in sealed housing and is mounted on outside of bins, hoppers, screw conveyors, etc. It can be used for bulk materials weighing 2 to 350 pounds per cubic foot; special arrangement of Micro switch is provided to operate on the light materials.

Indicators can be used also to stop machinery when feed chutes or elevator boots become clogged with material. Special models are available for use in hazardous locations and for internal mounting inside thick-walled or multiple compartment bins. Made by **Bin-Dicator Co.**, Dept. P-1415, 14615 E. Jefferson Ave., Detroit 15, Mich.

Mention Item NED-4814 when writing

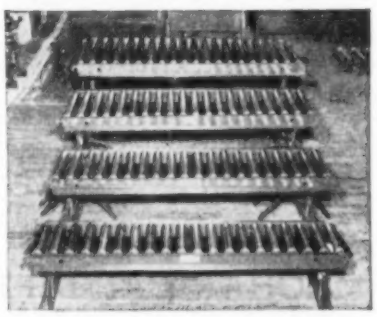
ENGINE STARTER



Five available sizes of air starters for gas, gasoline or diesel engines develop from 3 to 15 horsepower on 100 pounds air pressure. High torque developed by piston type motors makes them especially suitable for diesel applications involving high starting loads, and 5-cylinder radial design provides even torque through operating cycle. When air valve is open, air-actuated starter pinion automatically engages ring gear just before starter begins to crank engine, thus assuring positive engagement. Made by **Gardner-Denver Co.**, Quincy, Ill.

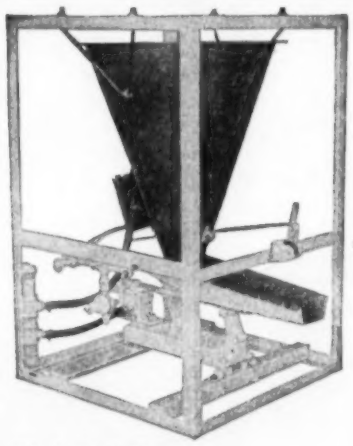
Mention Item NED-4815 when writing

ROLLER GRAVITY CONVEYORS



Having conveyor frame widths of 15 and 24 inches, new Rapid-Roller gravity conveyors supplement line of 12 and 18-inch wide roller units. All sizes are available in 5 and 10-foot sections. Conveyor channel is 3½ inches deep and 1 inch wide and is reinforced with cross angles to provide rigidity. Spanner bushing of each roller adds to strength. Conveyor rollers have die-formed ends to prevent damage to products handled. Rollers are 2 inches in diameter and are formed of 16-gage steel. Made by **Rapids-Standard Co.**, Dept. RR-152, 342 Rapistan Bldg., Grand Rapids 2, Mich.

Mention Item NED-4816 when writing



EFFICIENT MATERIAL HANDLING

SYNTRON

HYDRAULIC VIBRATION

"Hydra-Pulse"
VIBRATORS
For "FREE-FLOWING" bins, hoppers and chutes.

"Hydra-Flow"
VIBRATING FEEDERS
For "CONTROLLED FEEDING" of bulk materials.

"Hydra-Flow"
VIBRATING FEEDER MACHINES
Complete units, as illustrated above.

WATER—AIR—OR OIL OPERATED
to suit the application. EXPLOSION PROOF for use in hazardous atmospheric locations or handling explosive materials.

SYNTRON CO., 405 Lexington, Homer City, Pa.

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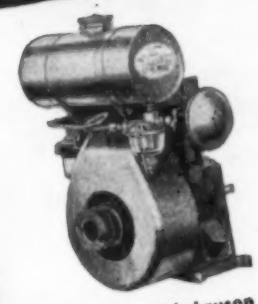
LAUSON
4-CYCLE, AIR-COOLED ENGINES
—DEPENDABLE POWER Plus Extra SALES APPEAL!



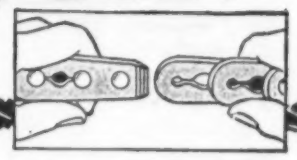
- Lauson Engines make your products more salable — insure customer satisfaction.
- Powered from 1 to 4½ H.P.
- Light weight — easy starting — economical operation.
- Machined mounting pad on crank case for direct mounting of pumps, generators, etc.
- Lauson Engines provide dependable power for hundreds of different applications.
- Nation-wide Lauson service available everywhere.

Dept. ND, The LAUSON Company, New Holstein Wis.
A Division of Hart-Carter Company
In Canada: Hart-Emerson Ltd., Winnipeg, Canada

Engine Builders for Over 50 Years!

Mention Item NED-4818 when writing

BROWNING Griplink BELT



★ Made from specially developed materials.
★ Easily adjustable, and quickly replaceable.
★ No machinery tear down or prolonged idleness.
★ Available from stock in all "V" Belt cross sections.
★ Write for completely detailed bulletin, V-161.

BROWNING MANUFACTURING CO., Inc
MAYSVILLE, KENTUCKY

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YOUR A-N CONTRACT MAY REQUIRE

Hydraulic color code identification or other printed self-adhesive cellophane marking or instruction stickers.
Made to your specs.

TOPFLIGHT TAPE CO.
DIVISION OF TOPFLIGHT TOOL COMPANY INC.
YORK, PENNSYLVANIA

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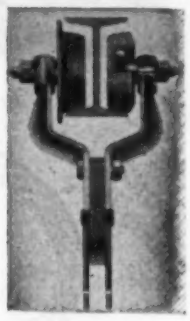
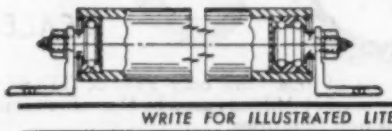
Gray I-Beam Trolleys

SAFE—EFFICIENT

Close Headroom
¼ to 5 ton Capacity
Adjustable For Any Type Beam
IMMEDIATE DELIVERY



TROLLEY WHEELS→
Plain or Flange Type
Single or Double Ball Race
Thoroughly Sealed



←GRAVITY ROLLERS
From 2¼" dia. up
Specify Length

WRITE FOR ILLUSTRATED LITERATURE

GRAY HUB COMPANY
INCORPORATED 1922
17565 GABLE AVENUE DETROIT 12, MICH.

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SPEED-UP Machine Feeding

GLOBE PRODUCTION LIFT

Cut machine-feeding costs . . . raise materials UP to machine level with a Globe Production Lift. Saves costly time-lag of workmen stooping or reaching. Boosts production as much as ⅓. Foot pedal control keeps materials at proper level. Installs anywhere.

WRITE today for illustrated Bulletin E1.

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GLOBE LIFTS & ELEVATORS

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A PRACTICAL MACHINE Washing Oily Greasy Metal Parts

FULLY AUTOMATIC
• No pumps or sprays
• No hand work

An old, tried cleaning method "DUNKING" developed into a modern automatic machine, with ACTIVE SOAK and ACTIVE WASH action USES COLD SOLUTION

A special designed "tray" lowered and raised into and out of the washing solution; easily and positively removing oils, grease, dirt etc. from Metal-parts.

PLEASE WRITE FOR DETAILS

THE SUPER-SOAK COMPANY
1441-3 South 65th Street West Allis, Wisc

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PALLET HANDLING TRUCK

Weighing only 920 pounds, Truck-Man model DF Pallet Toter has load capacity of 3000 pounds and can turn in its own length. Powered by AB 3-horsepower Wisconsin gasoline engine, truck has speed in either direction from creeping to 3 miles per hour. Operator rides with load. Rubber insert load wheels lessen jolts on rough floors and contribute to smooth entering of pallet. All controls including brake are incorporated in single transmission lever. Truck is regularly supplied with 48-inch forks, but other sizes are available. Made by **Truck-Man, Inc.**, 1414 W. Ganson St., Jackson, Mich.

▲ Mention Item NED-4824 when writing ▲

VISUAL INSTRUCTION AID

Large, attention - getting blackboard type photographic Eraso Prints have treated surfaces which can be written or drawn upon with crayon and afford rapid erasing. They facilitate instruction of salesmen and training of personnel in use of office forms and order books. Large graphs, charts, floor plans and layouts can be produced also.

Photograph is first taken of copy whether it is in printed form, drawing or working model; then photograph is 'blown-up' to desired size which can be as large as 40 x 70 inches; and finished print is coated so that it can be written upon. Each print is supplied with Eraso pencil that writes clearly, and markings can be wiped off easily. Service offered by **Rapid Copy Service**, 321 N. Wacker Dr., Chicago 6, Ill.

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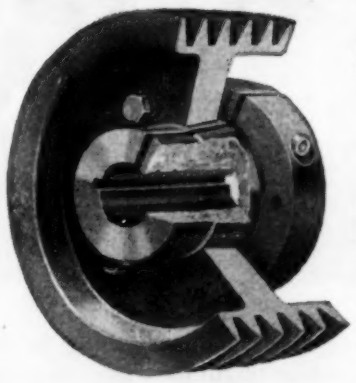
DRUM CARRYING ATTACHMENT

Designed for attachment to any 2000-pound fork truck, Tray-Hart Twin drum carrier can lift, transport, load and stack two 55-gallon drums simultaneously. Drums are held securely by wedge-like gravity grip of shoes faced with nonslipping rubber that prevents marring or denting of thin gage drums. Gripping of drums is facilitated by positioning angles which place drums in position even when carrier is not directly over them. Drums are released only when positive hydraulic pressure retracts shoes. Made by **Trayner-Reinhart**, Dept. D, 1627 Willow St., Oakland 7, Calif.

▲ Mention Item NED-4826 when writing ▲

CONGRESS Q-D



(Quick Detachable)
SHEAVES
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EASY ON
•
EASY OFF
•
Always Tight on the Shaft
•

Congress sheaves and belts, in all sizes from fhp to 200 hp, now carried in stock by the *world's largest manufacturers* of fhp drives.

Write for Catalog CD-200

CONGRESS DRIVES DIVISION
TANN CORPORATION
3746 E. Outer Drive Detroit 12, Michigan

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Resistance-Type Heating Tool

IDEAL "Thermo-Grip" Soldering Tools are away out in front for soldering lugs, wires, and terminals . . spot and seam soldering and other maintenance work.

SAFER . . . No open flame to char walls or ceilings or cause fires or explosions. No fumes.

FASTER . . . Always ready to use—no preparation or preheating.

EASIER . . . Unit is convenient and portable. Pliers grasp work leaving other hand free.

BETTER . . . Make a better solder joint. No cold flow joints. Complete adhesion of solder to parts. No waste of materials.—IDEAL INDUSTRIES, Inc., Sycamore, Illinois.

IDEAL "THERMO-GRIP" SOLDERING SET—1000 Watt Unit. Attachments for all types of soldering jobs. Ask for full information today.

IDEAL
DISTRIBUTED THROUGH
AMERICA'S LEADING WHOLESALERS
CANADIAN DISTRIBUTOR: IRVING SMITH, LTD., MONTREAL

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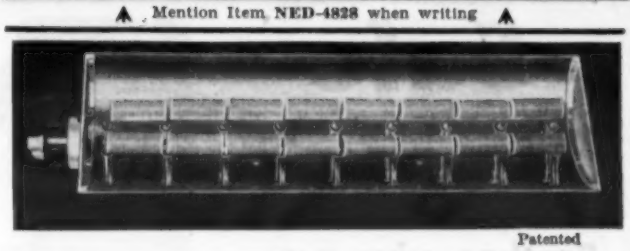

Patented

HIGH TEMPERATURE, RADIANT HEAT FOR PROCESSING

Doyle Infrared Heating and Drying Units provide, at small equipment cost, the high temperature, concentrated, radiant heat often required for surface drying, treating and conditioning coatings on paper, fibre and textiles. Especially effective with synthetic resins which react favorably under a high flash of heat, also in impregnating processes using latices or impregnating compounds.

Many industries use Doyle Units in continuous processing of sheet and roll materials, also as accessories to drying drums and ovens and for similar purposes. Each Doyle Unit is a complete, standard assembly including scientifically-designed reflector and control switch. Manufactured in a wide range of sizes for convenient installation over conveyors or as an integral part of other processing equipment. For technical specifications and prices write to:

THE J. E. Doyle COMPANY
1228 WEST 6TH STREET • CLEVELAND 13, OHIO

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Something NEW! Volatile Solvent

CARBON MET

A
HALOGENATED AROMATIC HYDROCARBON

A specific replacement for toxic Carbon Tetrachloride

Out and out metal dry cleaning solvent and degreaser in ready-to-use "Handy Kit" containing Patented dip and drier basket.

• Quick Cutting solvent against stubborn dirt and grease.
• Non-Explosive and relatively non-toxic.
• Non-Corrosive to metals. • Fast, clean evaporation.
• Non-Ionic . . . ideal for degreasing and cleaning electrical parts.

MUCH FASTER CUTTING THEN "CARBON TET" . . .
CAUSES NO RUSTING . . . LEAVES NO FILM

Sold by industrial jobbers everywhere. Shipped "*Prepaid*" Express, if your jobber is out of stock.

CURRAN CORP.
Mfg. Chemists
LAWRENCE, MASS.
IMMEDIATE DELIVERY . . .
1 GALLON OR A TANK CAR

U. S. PAT. 2318842

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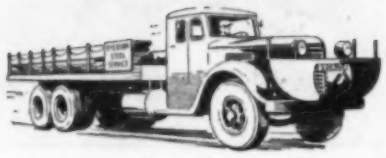
WHEN YOU NEED STEEL CALL RYERSON



Contact Ryerson for prompt shipment of dependable steel products. Because of great demand, all sizes are not always in stock; but you will find that we can usually take care of your requirements.

PRINCIPAL PRODUCTS

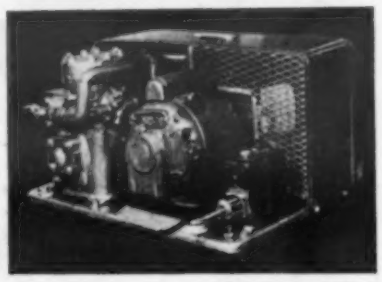
Bars • Structurals • Plates • Sheets • Tubing • Allegheny Stainless • Alloy Steel • Safety Floor Plate • Babbitt • Solder Metal Working Tools & Machinery, etc.

JOSEPH T. RYERSON & SON, INC.

Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco

Mention Item NED-4831 when writing

ROOM SIZE DEHUMIDIFIER

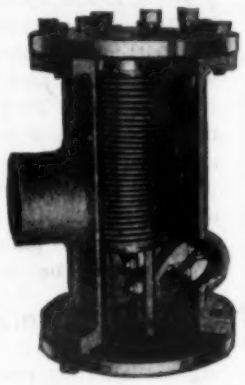


Comparatively low-cost Carrier Humidry humidification unit is capable of removing approximately 34 pints of water per day from atmosphere of average size room. Suitable for plugging into any standard electrical outlet, unit requires only single drain connection. Dehumidifier is particularly suited for removing moisture from rooms where valuable tools are stored, for protecting goods damaged by mold or mildew, or for use in offices where humidity causes deterioration of equipment and discomfort. It is powered by 1/3-horsepower motor. Made by **Carrier Corp.**, 302 S. Geddes St., Syracuse 1, N. Y.

Mnetion Item NED-4834 when writing

STAINLESS STEEL MANOMETER

Designed to measure and control flow, liquid level or specific gravity in processes involving caustics or difficult to handle acids such as sulphuric, acetic, nitric and phosphoric, this Aneroid Manometer has housing and liquid-contacting parts fabricated of type 316 stainless steel. Corrosive fluids can be introduced directly to manometer, and need for sealing fluids and purges is eliminated. Unit is available in ranges of 20, 50, 100 and 200 inches of water differential with body pressure rating of 300 pounds per square inch. Made by **Taylor Instrument Cos.**, P.O. Box 110, Rochester 1, N. Y.



Mention Item NED-4835 when writing

COLLAPSIBLE TAP

Style LL receding chaser, collapsible tap is designed primarily for tapping tapered threads but can be used for American Tapered pipe threads or for any line pipe, tubing, casing or drill pipe threads listed in A.P.I. standards. It can be adjusted for thread length. Collapsing action of tap causes chasers to drop into tap head at completion of thread so that tool can be withdrawn without reversing. Chasers recede into head at rate equal to taper being produced. Tap can be used as stationary or rotary tool or converted from one type to another. Left-hand threads can be cut by using style LM. Style LL tool is available in four sizes to cover range of nominal pipe sizes from 1 to 12 inches. Made by **Landis Machine Co.**, 55 Fifth St., Waynesboro, Pa.

Mention Item NED-4836 when writing

SAFE-LINE WIRE ROPE CLAMPS

Write for details of this—the only PERFECTED wire rope clamp on the market. Millions used by Manufacturers, the Armed Forces and Industries.

NATIONAL PRODUCTION COMPANY
4557 ST. JEAN AVENUE • DETROIT 13, MICHIGAN

Mention Item NED-4838 when writing

JIFFY ALL METAL CABINET

32 DRAWER UNIT ONLY $8.95 POSTAGE PAID

64 DRAWER UNIT $15.95

FOR SMALL PARTS STORAGE OR ASSEMBLY BENCH WORK

with RUST-PROOF ALUMINUM DRAWERS

APPROXIMATE SIZES
DRAWER
1¼" Deep
2¾" Wide
6" Long
32 DRAWER UNIT
6" Deep
12¼" Wide
15¼" High
64 DRAWER UNIT
6" Deep
25½" Wide
15¼" High

Spot welded steel cabinet, metal flange drawer guides, enamel finish and solid one-piece aluminum drawers in natural satin finish. The first multiple drawer (32 or 64 drawer units) metal cabinet for small parts storage or assembly bench work at such a low cost. Order now for immediate delivery. Send check or money order or rated companies shipped on receipt of purchase order.

KAYTEE PRODUCTS
DEPT P. • BOX 588 • CANTON, OHIO

Mention Item NED-4839 when writing

Safe Floors?

Brother, give me – INLAND 4-WAY FLOOR PLATE

STOCKED BY LEADING STEEL WAREHOUSES

WRITE FOR BOOKLET • Inland Steel Co., 38 S. Dearborn St., Chicago 3, Ill.

Mention Item NED-4832 when writing

ELECTRIC HEAT

INDUSTRY'S FASTEST GROWING TOOL

More and more users are turning to CHROMALOX Electric Heat. That's because rugged, easy-to-install CHROMALOX Units save time and money by increasing production and decreasing rejects. Low initial and installation costs, dependable day-in-day-out service, accurate temperature control are some of the advantages which result through their use.

SEE FOR YOURSELF

Get the free booklet "100 Ways to Apply Electric Heat" for the full story about this modern industrial tool.

EDWIN L. WIEGAND CO., 7509 THOMAS BOULEVARD, PITTSBURGH 8, PA.

See other advertisement on page 51.

CHROMALOX IB-72

ELECTRIC HEAT FOR MODERN INDUSTRY

Mention Item NED-4833 when writing

"A place for everything and everything in its place," is a saying which might have been inspired by Logan Conveyors. For Logan Conveyors, an integral part of modern production equipment, deliver raw materials or "parts in process" to the right spot at the right time . . . without the expense of human effort. Logan Conveyors are truly Production Machinery . . . not just auxiliary equipment. Write for literature.

SINCE Logan 1876

Logan Conveyors

LOGAN CO., INC., 215 CABEL ST., LOUISVILLE, KY.

Mention Item NED-4837 when writing

Sets a new high standard for spray gun performance

the new BINKS MODEL 18

You have to use this beautiful, well balanced production gun to believe its exceptional performance. Men who know fine finishing acclaim this new Binks masterpiece as the finest spray gun ever made. **Ask your jobber**—or write us—for full data on this outstanding spray gun.

Binks MANUFACTURING COMPANY

3122-34 CARROLL AVENUE, CHICAGO 12, ILLINOIS

Mention Item NED-4840 when writing

NEW BUCKEYE STREAM POWER horizontal grinders

REMOVE MORE METAL IN LESS TIME

SPEEDS: 3000 to 22,000 RPM. WEIGHTS: 1 to 12 lbs. CAPACITIES: 1/2" to 8" dia.

● Production goes up—costs go down—when you put a Buckeye Stream-Power Horizontal Grinder on the job! Newly designed Stream-Power line also includes Vertical Grinders and Sanders, Air Wrenches, Shears, Nibblers, Reversible Drills and Screwdrivers. You get 26 new construction, performance and maintenance features. 65 to 70% more power—weight reduced 22 to 29%—they're 9 to 12% smaller.

BETTY BUCKEYE says: Let me send you full information on the new Stream-Power line. Write Buckeye Tools Corp., Dayton 1, Ohio.

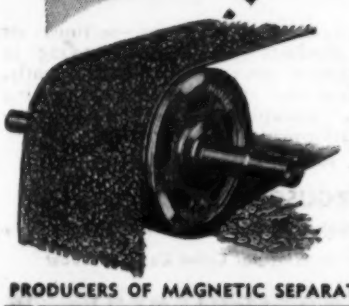
BUCKEYE Pneumatic and Electric PORTABLE POWER TOOLS

▲ Mention Item NED-4841 when writing ▲

PLATE OR PULLEY

Homer "PERMANENT" NON-ELECTRIC MAGNETIC SEPARATORS

Available in standard widths from 4" to 26". Special sizes made to specifications. All HOMERS have self-insulating decks, with covers to protect powerful permanent magnet assemblies. Homer Permanent Magnetic Separators are "low-cost" protection against TRAMP-METAL damage.



Available in standard diameters of 12", 15", 18", 20", 24" and 30", with belt widths from 12" to 60". Homer Permanent Magnetic Pulleys can be used at head end or as idlers in belt conveyor systems and are furnished with or without shaft. Write for bulletins on HOMER "non-electric" Permanent Magnetic Separators.

PRODUCERS OF MAGNETIC SEPARATOR EQUIPMENT SINCE 1923

The HOMER Manufacturing Co., Inc. Dept. 1-25 LIMA • • • OHIO

PERMANENT MAGNETIC SEPARATORS — PLATE TYPES AND PULLEYS

▲ Mention Item NED-4842 when writing ▲

Sixty years of specialized experience in making industrial wire mesh fabricated parts, is available to you . . . assuring better performance at reduced costs. Production is completely controlled from designing, drawing, weaving and fabrication to final assembly and delivery. Jelliff's competent engineers welcome the opportunity to analyze your specific requirements and submit practical and economical recommendations.

Write DEPT. 211 for literature

THE C. O. JELLIFF MFG. CORP.

DIPPING BASKETS, LEKTROMESH, RESISTANCE WIRE — WIRE MESH PARTS, WIRE CLOTH, STRAINERS • FILTERS

SOUTHPORT — CONNECTICUT

▲ Mention Item NED-4843 when writing ▲

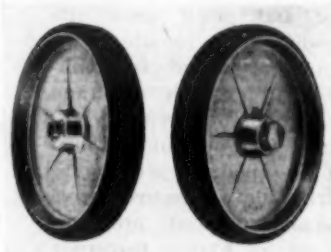
PORTABLE WATER COOLER

Providing up to 80 cups of properly cooled water per hour, Water Boy portable electric water cooler is designed to serve up to 30 people. Hermetically sealed Rollator condensing unit employs Freon-12 refrigerant and is powered by integral 1/8-horsepower 110-volt alternating current motor. Reservoir holds 5 quarts of water, and additional capacity can be provided by using 1, 2, 3, 4 or 5-gallon water bottle. Convenient cup dispenser is refilled easily.

Also available for use with cooler is cabinet which provides storage space for drinking cups and extra water bottle, convenient means for disposal of used cups and removable receptacle for waste water. Adjustable metal glides facilitate leveling. Finish is golden tan hammered type lacquer with chromium trim. Made by **Borg-Warner Corp.**, Norge Div., 670 E. Woodbridge St., Detroit 26, Mich.

▲ Mention Item NED-4844 when writing ▲

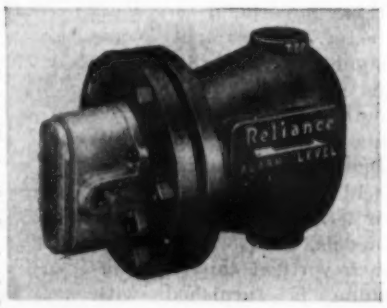
INDUSTRIAL WHEELS



Fabricated of lightweight, corrosion-resistant, high strength aluminum alloy, Aerol-Seal industrial wheels can be used for either inside or outside mounting and are available in 6, 8, 10, 14 and 20-inch sizes. They are watertight and, during normal wheel life, do not require bearing adjustment, lubrication or other service. Tough all-purpose solid rubber tire molded onto wheel core is oil and brine resistant and will not mark floors. Sealed lubrication provides for sparkproof operation in hazardous locations. Made by **Aerol Co.**, 1823 E. Washington Blvd., Los Angeles 21, Calif.

▲ Mention Item NED-4845 when writing ▲

LIQUID LEVEL ALARM



Because it actuates warning signals such as bells, sirens or lights when liquid levels in small boilers or tanks reach predetermined low, this Levalarm device assures safe operation. It can be used on pressures up to 250 pounds. Electric switch is operated by permanent magnet when Monel float rises or falls in separate float chamber. Switch can be wired for normally-open or normally-closed circuit and is dust, vapor and explosionproof. Made by **Reliance Gauge Column Co.**, 5904 Carneige Ave., Cleveland 3, O.

▲ Mention Item NED-4846 when writing ▲

'LOOK AT WELLMAN'

Wellman Bronze & Aluminum Co., of Cleveland invites you to inspect their light metal casting facilities. Three modern plants make peak production of your requirements an actual fact. Modern laboratories. X-ray facilities.

Today's preference is light metal casting in either magnesium or aluminum. Visit the Wellman plants in person or write for full particulars.

WOOD AND METAL PATTERNS • AMPCO BRONZE CASTINGS

WELLMAN BRONZE & ALUMINUM CO.

2563 EAST 93rd ST. CLEVELAND 4, OHIO

▲ Mention Item NED-4847 when writing ▲

HOOKS, TONGS GRIPS and SLINGS

A COMPLETE LINE OF HOIST GRABS—for fast safe handling of *pipe, rails, drums, plate* and *structural steel, stone, timber, boxes* and *odd-shaped objects.* Carefully engineered Downs Hoist Grabs have a safety factor much greater than capacity ratings listed. Many types of hooks, tongs, grips and slings available for quick delivery.

WRITE FOR FREE ILLUSTRATED CATALOG #200

DOWNS CRANE & HOIST CO.

MECHANICAL ENGINEERS — 540 W. VERNON AVENUE LOS ANGELES 37, CALIF.

Electric Cranes • Hand Cranes • Jib Cranes • Sheaves • Sheave Blocks • Plate Grips • Plate Hooks • Crane Trolley Hoists • Crane Wheels • Crane End Truck Units • Jib Crane Fittings • Automatic Mechanical Load Brake Crane Hook Blocks

▲ Mention Item NED-4848 when writing ▲

Get Lifetime Fidelity in

PRESSURE RECORDERS!

Install a Foxboro Pressure Recorder, and you get maximum assurance that you'll never need to replace it throughout the lifetime of the equipment it serves!

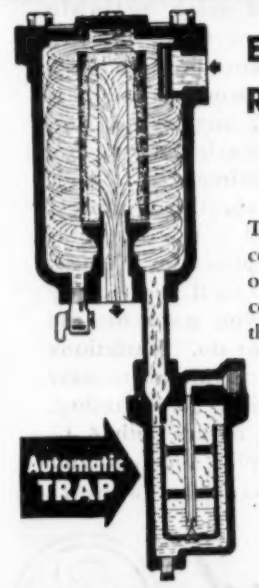
Foxboro Pressure Recorders are *engineered for lifetime fidelity* . . . and designed for any service from full vacuum to 10,000 psi. (higher ranges on special order.) Multiple-pen models record up to 4 pressures on single chart.

Write for complete Catalog 22A. The Foxboro Co., 134 Neponset Avenue, Foxboro, Mass., U. S. A. Also Montreal, Canada. Branches in principal cities.

FOXBORO Reg. U. S. Pat. Off. PRESSURE RECORDERS

▲ Mention Item NED-4849 when writing ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES

OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 105.

R. P. ADAMS CO., INC.

227 E. Park Drive • Buffalo 17, N. Y.

ADAMS Poro-Stone AIR FILTER

▲ Mention Item NED-4850 when writing ▲

MOLYBDENUM High Speed Steels

You should know these FACTS!

At least one type of Molybdenum high speed steel is listed and promoted, on a basis of equivalent and interchangeable performance with tungsten high speed steel, by makers of high speed steel.

Users' reports of Molybdenum high speed tools *everywhere* indicate that performance at least equals and in many cases betters that of tungsten tools.

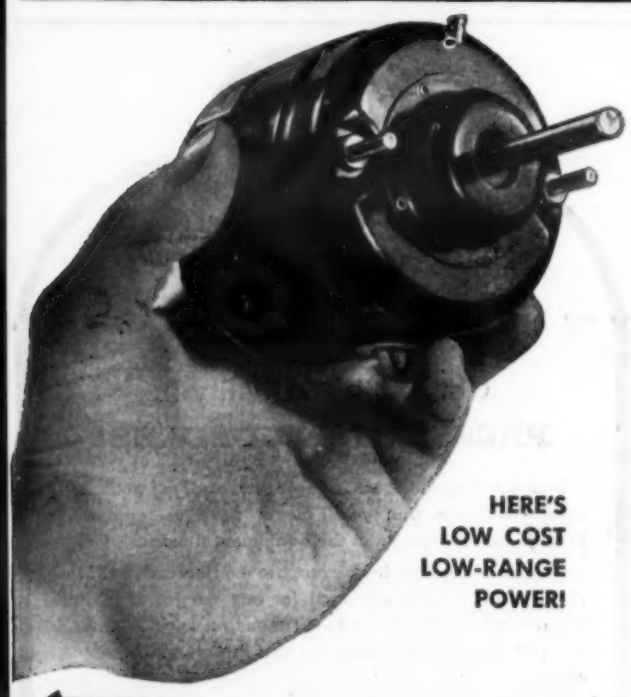
Molybdenum high speed steels can save money in production—for proof, send for a copy of our FREE and informative booklet.

This book sent to you FREE

Climax Molybdenum Company
500 Fifth Avenue · New York City

HS4

▲ Mention Item NED-4851 when writing ▲

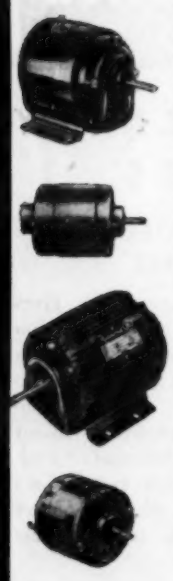


HERE'S LOW COST LOW-RANGE POWER!

Redmond MICROMOTORS

OVER 100 STANDARD MODELS

A.C. up to 1/15 Horsepower—D.C. up to 1/20 Horsepower



If small motors can make a big difference in the life, performance, or efficiency of your product, best you get acquainted with reliable Redmond Micromotors. They're sturdy little low-range power units... smooth, quiet, dependable in operation... designed, engineered, and built to give you maximum long-life performance at minimum cost. And, with over 100 standard models thoroughly proved in use on countless diversified applications, chances are at Redmond you'll find exactly the Micromotor you want for the job you want it to do. Variations from standard also available to meet special requirements. New Catalog, just off the press, covers both A. C. and D. C. lines plus blowers and speed controllers... want a copy?

Redmond COMPANY, INC.
OWOSSO, MICHIGAN

REDMOND ®

OFFICES IN NEW YORK, CHICAGO, DAYTON, LOS ANGELES, SEATTLE

▲ Mention Item NED-4852 when writing ▲

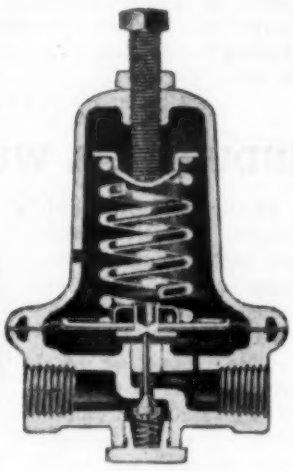
MINIATURE THERMOSTAT

Improved line of Mighty Mite miniature thermostats *(See Sept. '46 NED)* features triple insulation barriers of compressed silicone Fiberglas sleeving, faster thermal reaction and higher temperature ratings. Underwriters' laboratories listing is 2 amperes at 115 volts alternating current.

Of sealed construction and extremely small in size, thermostats have wide range of applications in air conditioning, electrical appliance, fractional horsepower motor, aviation and other fields. They are preset to user's temperature specifications. Made by **Mechanical Industries Production Co.**, 217 Ash St., Akron 3, O.

▲ Mention Item NED-4853 when writing ▲

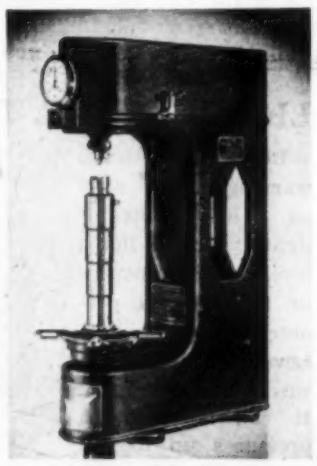
REDUCING VALVE



Self-contained type No. 67 pressure reducing regulator can be used for air or gas service. It provides close pressure maintenance under exacting conditions on applications such as instrument air supply service and panel pneumatic loading for remote hand control. Valve is available in ¼-inch size and is capable of reducing 6-cubic feet per minute flow at 100 pounds per square inch inlet pressure to 5 pounds reduced pressure. Made by **Fisher Governor Co.**, NED-7 Fisher Bldg., Marshalltown, Iowa.

▲ Mention Item NED-4854 when writing ▲

HARDNESS TESTER



Surface hardened steel, exceptionally thin metals, rolled sheet steel and other materials can be checked for Rockwell hardness with this Superficial hardness tester. Instrument is designed for checking surfaces that must not be marred and surfaces having extremely small area. Depth of penetration is held to limits of 0.005-inch or less. Available in three models, with 8, 12 and 16-inch vertical capacity, machine is furnished with lapped diamond cone and 1/16-inch steel ball penetrators; telescoping cover and oil reservoir for elevating screw; standard 2½-inch, checking, 'V' and raised 'V' anvils; metal dust and leatherette instrument covers; and test blocks. Made by **Clark Instrument, Inc.**, 10200 Ford Rd., Dearborn, Mich.

▲ Mention Item NED-4855 when writing ▲

50 TO 200% GREATER CAPACITY

BRO-JO

...As much as 200% greater volume than any other pump of like H.P.

The fully enclosed impeller eliminates fluid friction . . . and prevents foreign matter from gathering between impeller blades and housing.

Special oil recirculation in motor allows motor to run indefinitely.

All parts non-corrosive . . . case and mounting fixture are of Monel Metal and all fittings Monel or stainless steel . . . Neoprene mounting ring and base.

Distributor Inquiries Invited

- ENCLOSED IMPELLER
- WILL NOT CLOG OR LIME
- SPECIAL OIL RECIRCULATION IN MOTOR
- MONEL METAL CASE AND FITTINGS
- ALL PARTS NON-CORROSIVE

BROADBENT-JOHNSTON, INC.
EL MONTE, CALIF.

▲ Mention Item NED-4856 when writing ▲

WANTED BAD ODORS TO CLEAR AWAY

AMAZING NEW

amOZONer

Freshens Air in Shops, Chemical Plants, All enclosed places where objectionable smells persist

Bad air or air filled with noxious gases, frequently affects the health, efficiency and general attitude of workers in enclosed places. Install the new "amOZONer", a simplified ozone generating unit that keeps air fresh, clears the atmosphere up to 6,000 square feet of floor space and greatly improves working conditions.

Easy to Install
Economical to Operate

Send for full particulars:
American Associates, Inc.
1730 Fairmount Avenue
Philadelphia 30, Pa.

▲ Mention Item NED-4857 when writing ▲

The Cheapest Distance Between Two Points— is an A-F CONVEYOR SYSTEM!

Yes, an Alvey-Ferguson *engineered* Conveyor—sections or system—will keep parts, products or packages moving in a "steady stream" throughout your plant — efficiently, inexpensively. A-F Engineers are specialists in engineering money-saving, time-saving. Completely Co-ordinated Conveyor Systems—systems "tailor-made" for your plant.

Write, without obligation, for illustrated folder—today!

THE ALVEY-FERGUSON COMPANY

36 Disney Street *Established 1901* Cincinnati 9, Ohio

Offices or Representatives in Principal Cities Coast-to-Coast

CONVEYING EQUIPMENT
Alvey-Ferguson
METAL PRODUCTS CLEANING EQUIPMENT

▲ Mention Item NED-4858 when writing ▲

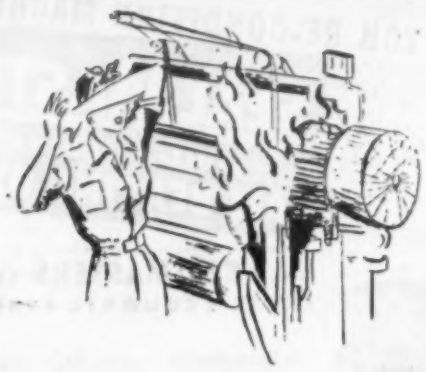
Webster Steam Heating Specialties give years of trouble-free service. Materials are selected for ability to withstand severe service. Parts are inspected after each manufacturing operation. No item leaves the factory until it has passed all inspections and tests, and proved that it will function properly. Technical data on request.

1. Webster Dirt Strainers are placed ahead of steam traps to provide protection from dirt.
2. Webster Type WI Extended Surface Radiation—used where floor or wall space is limited. For steam or hot water heating.
3. Webster Thermostatic Traps—for low pressure service on radiators. For high pressure service on process steam-using equipment.
4. Webster Radiator Valves for steam heating.
5. Webster Float and Thermostatic Drip Traps. For low pressure service on drips of mains, unit heaters, etc. Also for high pressure service on process steam-using equipment.

Address Dept. 1707 Federal Street

WARREN WEBSTER & CO., CAMDEN, N. J.

▲ Mention Item NED-4859 when writing ▲



FIRE RISK CAN BE AVOIDED
USE
NON-INFLAMMABLE CLEANERS

Now you can replace gasoline, kerosene, naphtha and other risky solvents with Penetone Senior—the liquid that's non-inflammable, non-fuming, and easy on the skin.

Modern industrial plants use Senior to clean factory floors, machines, and tools, and to degrease small parts in tank cleaning. It's easy to rinse and is safe on any surface. Send for Field Service Reports on Plant Maintenance and Direct Contact Degreasing.

THE PENETONE COMPANY
BOX ND 7 **TENAFLY, N. J.**

Mention Item NED-4860 when writing

Quarter to One!

That's the wide range of drive sizes—¼" to 1"—offered in the popular socket wrench sets made by Plomb Tool Company.

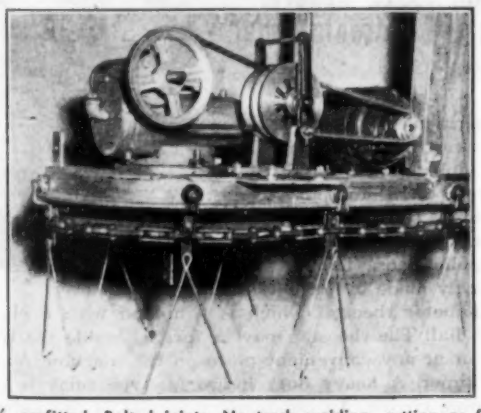
Do you need a midget ¼" drive socket wrench set for speedy nut running on carburetors, radios or other small equipment? Or do you need an extra heavy-duty 1" drive set for large bolts and nuts used on big vehicles and machines? Regardless of your requirements, you'll find the right set among the many types made by the Plomb Tool Company. You can get big sets with a wide range of socket sizes, or you can buy inexpensive basic sets which contain only the most-used sizes. The sockets, handles and attachments in all of these sets are of the highest quality obtainable—accurate, superior in design, made of the finest alloy steels, and noted for long life. Buy them today from your Dealer.

PLOMB TOOL COMPANY
2275T Santa Fe Avenue, Los Angeles 54

4882

Mention Item NED-4861 when writing

KEYSTONE JUNIOR CONVEYORS



100% prefitted. Bolted joints. No track welding, cutting or fitting required for installation. Easily installed. Low first cost. Overhead or floor supported. Load capacity 75# per trolley. Rivetless Drop Forged chain 2" pitch. Ball-bearing trolleys.

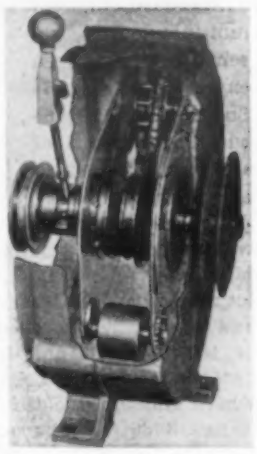
KEYSTONE JUNIOR CONVEYORS are identical to their big brothers—the 348 and 458 conveyors, which are the accepted standard throughout the world. The Keystone Junior picks up where the 348 leaves off. Handling loads of 75# per trolley or live loads of up to 10,000# it is a Little Giant. Caterpillar or Corner Drives available. Vertical turns as small as 2' Radius. Horizontal turns as small as 9" Radius. Rotating hooks available for use in spray booths, ovens, etc. Conveyor speeds from 3-I.P.M. to 80 F.P.M. available.

Write for Bulletin No. 448

BEVERIDGE MILLWRIGHT SERVICE, INC.
7376 Grand River Ave. Detroit 4, Mich.

Mnetion Item NED-4862 when writing

VARIABLE SPEED DRIVE

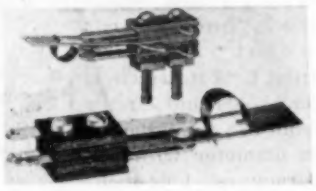


Infinite ratio and stepless control of speeds from 0 to 800 revolutions per minute at constant torque are provided by 5-horsepower Speed Selector drive. It combines planetary motion with V-belt drive using variable pitch sheaves to permit stepless infinite ratio changes in rapid succession.

Speed control can be installed in any convenient location where belt to motor and another to driven shaft can be provided. Prelubricated sealed ball bearings which can take end thrust permit installation in any position on new or existing equipment. Sturdily constructed, units have cast iron sheaves on hardened and ground shafts and are mounted in cast aluminum housings. Made by **Speed Selector Inc.**, 118-N Noble Court, Cleveland 13, O.

Mention Item NED-4863 when writing

OPEN-BLADE SNAP SWITCH



Underwriters' Laboratories approved open-blade snap-action switch is rated 15 amperes on 125-volt or 7-1/2 amperes on 250-volt alternating current. Unit features fast-action rolling spring and is furnished with either return or set type action. It is available in two sizes, and large model has oversize contacts which assure maximum life where continuous load closely approximates rated load. Switches are available with variations in operating characteristics as well as form and length of blade. Made by **Acro Electric Co.**, 1312 Superior Ave., Cleveland 14, O.

Mention Item NED-4864 when writing

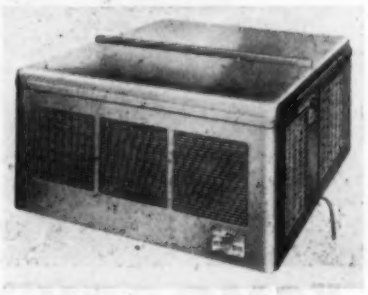
IMPACT HAMMER & AIR PRESS

Equipped with universal rotary feeder bases, Mead air press and impact hammer shown right and left respectively can be adapted to wide range of industrial fabricating applications. Air press has heavy vertical cast-iron stand which provides rigidity under working pressure, and bolt holes are located for rapid attachment to universal base. Maximum opening between ram and base is 7-1/2 inches.

Impact hammer is equipped also with heavy base and can be mounted conveniently on ordinary shop bench. Hammer is capable of 5000 cycles per hour, and entire assembly weighs approximately 70 pounds. Made by **Mead Specialties Co.**, Dept. HP-40, 4114 N. Knox Ave., Chicago 41, Ill.

Mention Item NED-4865 when writing

ROOM AIR CONDITIONER



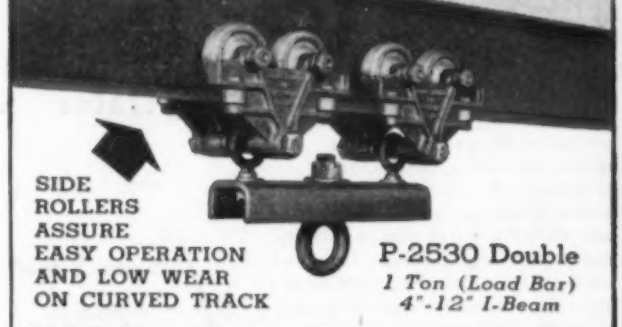
Economical cooling of offices and other areas up to 500 square feet in size is provided by window type air conditioner which is equipped with two hermetically sealed, self-oiling Meter-Miser compressors. One compressor has adequate capacity to cool room during night and temperate weather, and on extremely hot days, both refrigerating systems can be operated simultaneously. Together they provide more than 3/4-ton refrigerating capacity. Conditioner filters, dehumidifies, cools and circulates air at rate of 325 cubic feet per minute.

Air conditioner is controlled by master switch which regulates fan and cooling systems and by fresh air control which governs amount of outside air brought into unit. Thermostat control can be furnished to provide automatic operation of one compressor.

Conditioner operates on 230-volt, 50/60-cycle alternating current. Cooling and condensing fans are powered by 1/6-horsepower electric motor. Insulation, rubber mountings and hermetically sealed compressors reduce noise to minimum. Units are finished in bronze enamel but can be refinished to harmonize with all decorative schemes. Made by **General Motors Corp.**, Frigidaire Div., Dayton 1, O.

Mention Item NED-4866 when writing

hand pushed
TROLLEYS



SIDE ROLLERS ASSURE EASY OPERATION AND LOW WEAR ON CURVED TRACK

P-2530 Double
1 Ton (Load Bar)
4"-12" I-Beam

Webb *Hand Pushed Trolleys* are versatile, simple, economical, effective. Drop-forged, hardened wheels assure long wear; ball bearings and side-guide rollers make them very easy to push. Write for *Hand Pushed Trolley* Bulletin and prices.

JERVIS B. WEBB CO.
8951 ALPINE · DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES

Mention Item NED-4867 when writing

FOR EFFECTIVE HEATING FROM HIGH CEILING INSTALLATIONS

*Trade Mark Reg. U. S. Pat. Off.

for Effective Heating from High Ceiling Installations

Increased airflow and lower final air temperatures of the new, circular "Vertiflow" Unit Heater make it possible to heat floor areas from greater heights . . . thereby providing greater heating efficiency with fewer units. The new, Young heating element provides correct final air temperatures, maintains more even heat at thermostat levels, and eliminates excessive air buoyancy, which causes over-heated air to rise before reaching floor areas. A patent-applied-for, protective motor cooling principle prevents motor "baking" by radiant core heat.

SEND FOR NEW FREE CATALOG NO. 2648

Young "Vertiflow" Catalog No. 2648 is just off the press. It gives complete descriptions, ratings and specifications for 7 "Vertiflow" models which deliver from 52,600 to 552,000 Btu per hr under standard conditions. Send for your free copy today!

YOUNG
HEAT TRANSFER PRODUCTS

YOUNG RADIATOR CO.
Dept. 4286 Racine, Wis., U.S.A.
Sales and Eng. Offices in All Principal Cities

HEATING, COOLING AND AIR CONDITIONING PRODUCTS
Convectors • Unit Heaters • Heating coils • Cooling coils • Evaporators • Air conditioning units •

AUTOMOTIVE AND INDUSTRIAL PRODUCTS
Gas, gasoline, Diesel engine cooling, radiators • Jacket water coolers • Heat exchangers • Intercoolers • Condensers • Evaporating coolers • Oil coolers • Gas coolers • Atmospheric cooling and condensing units • Supercharger intercoolers • Aircraft heat transfer equipment

Mention Item NED-4868 when writing

NORMA-HOFFMANN *Precision* BEARINGS

A TYPE AND SIZE FOR MOST APPLICATIONS

No matter what your bearing requirement . . . for electric motors, machine tools, business machines, instruments or household appliances ... Norma-Hoffmann can give you the right bearing for your particular application. These *Norma-Hoffmann precision bearings*, ball or roller, will improve product performance with efficient friction-free operation. Their built-in ability to operate dependably under every load, speed and duty means you get long life with minimum maintenance. 108 distinct series from ⅛" to 21" bore gives you a wide range of choice. Write for catalog.

NORMA-HOFFMANN BEARINGS CORPORATION
Precision Ball, Roller and Thrust Bearings
STAMFORD, CONNECTICUT

Mention Item NED-4869 when writing

BE FRESH . . . STAY FRESH

wear a DUPOR Automatic Water-cooled Respirator

For years a prime favorite of respirator users. Sponge filter saturated in water provides moist air—cool, comfortable breathing. Keeps out dust, fumes, smoke, paint spray. Face mask is of soft white rubber. Maximum visibility. Automatic valve exhausts breathed air instantly. Wear while paint spraying, or as protection against gases, dusts, smoke, fumes.

Sample sent $7.65 pp

H. S. COVER
South Bend, Ind.

Mention Item NED-4870 when writing

Where Dependability counts most . . . it's VALVAIRS

Diagram shows double-acting air cylinder operated by Valvair 4-way solenoid valve, spring return.

DEPENDABILITY — That's outstanding in Valvair performance. Solenoids are Stellite-welded to resist wear; do not mushroom. Standard Valvairs have operated over 2,000,000 times at 100 lbs. with never a leak. *Exclusive features.* Patented basic design eliminates metal seats; non-corrosive (cast bronze body, stainless steel parts); full pipe area used with minimum drop. 2-way, 3-way, 4-way types. Get full details and prices.

Ask for Bulletin "A-N"

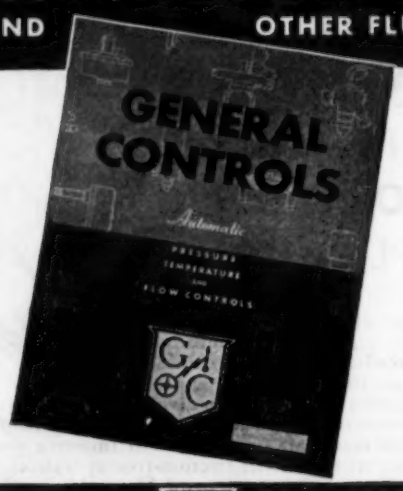
VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio

Valvair 2-WAY 3-WAY 4-WAY

Mention Item NED-4871 when writing

Write Today

FOR CATALOG 52C—
PRESENTING A COMPLETE LINE OF AUTOMATIC CONTROLS FOR GAS, OIL, WATER, AIR, STEAM, REFRIGERANT . . . AND OTHER FLUIDS.



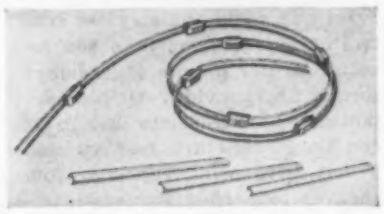
GENERAL CONTROLS
801 ALLEN AVENUE GLENDALE 1, CALIF.

Manufacturers of Automatic Pressure, Temperature & Flow Controls

FACTORY BRANCHES: PHILADELPHIA • ATLANTA • BOSTON • CHICAGO • DALLAS KANSAS CITY • NEW YORK • DENVER • DETROIT • CLEVELAND • PITTSBURGH HOUSTON • SEATTLE • SAN FRANCISCO • DISTRIBUTORS IN PRINCIPAL CITIES

Mention Item NED-4872 when writing

MULTIPLE OUTLET ASSEMBLY

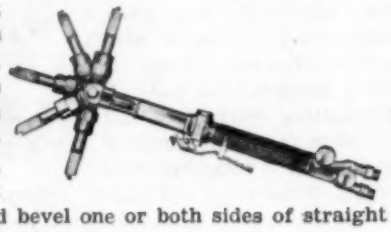


Standard line of multiple outlet assemblies has been expanded to include Snapicoil multiple outlets for electrical systems. Consisting of standard No. 1927 plug receptacles wired with two No. 12 type R connectors, wiring harness can be furnished in four different combinations. Type 19C12 is 25-foot coil and has 25 outlets spaced on 12-inch centers; type 19C24 is 50-foot coil and has outlets spaced on 24-inch centers; type 19C36 is 100-foot coil and has 33 outlets spaced on 36-inch centers; and type 19C03 is 18-inch coil designed for use where cluster of closely spaced outlets is necessary, and it has 6 outlets spaced on 3-inch centers. Each coil is furnished with No. 1900C cover sections cut to length for installation between receptacles. Made by **Wiremold Co.**, 10 Railroad Place, Hartford 10, Conn.

Mention Item NED-4873 when writing

WELDING & CUTTING TORCH

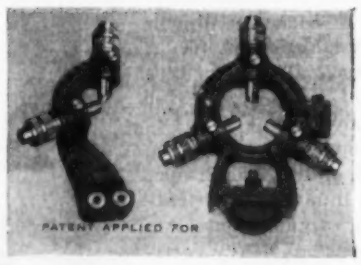
Flexble head of this Cristorch welding and cutting torch can be revolved through arc of 180 degrees. This design makes relatively inaccessable locations easy to reach. Torch will cut metal thicknesses from 1/32 to 4 inches, and holes and circles from 3/8 to 30 inches in diameter with accuracy of 1/64-inch. In addition, it can cut countersunk holes and bevel one or both sides of straight cut in single operation.



Flexible head has side-opening tip locknut which minimizes time required for insertion or removal of tips. Valves are complete assemblies and can be removed from body of torch for inspection and repair. Made by **Hamilton Tool Co.**, Ninth St. at Hanover, Hamilton, O.

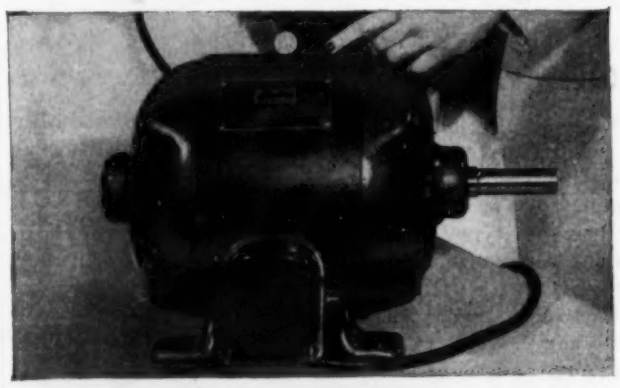
Mention Item NED-4874 when writing

LATHE WORK SUPPORTS



Featuring wrenchless adjustment and locking of jaws, these DeLuxe type follower rest and center rest lathe work supports provide for quick precision operation. Each jaw has knurled knob for adjusting jaw position and thumb-screw for locking. Double-acting compound screw thread provides approximately 3/16-inch jaw movement for each revolution of adjusting knob. Mechanism has smooth action with sufficient resistance to hold jaw securely in position until locked with thumb-screw. Brass jaws slide through steel sleeves pressed into supporting frame. All parts are readily replaced. Sizes are available to fit all current models of South Bend lathes. Made by **South Bend Lathe Co.**, 307 E. Madison St., South Bend 22, Ind.

Mention Item NED-4875 when writing



"SMOOTH"
MOTOR PERFORMANCE

Here's proof of smoothness of the new Life-Line! Coin balanced on edge is undisturbed as motor starts, runs and stops . . . dramatic evidence of freedom from vibration and resulting noise! Modern tests check smoothness of every unit. Get full details from your nearest Westinghouse office, or write to Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-21462

Immediate Delivery on Standard Ratings 1 to 15 hp.

Westinghouse
Life-Line motors

Mention Item NED-4876 when writing

WHEN YOU RE-CONDITION MACHINERY install SEALMASTER Self-Aligning BALL BEARING UNITS

ONLY SEALMASTERS COMBINE THESE ECONOMIC FEATURES

- **Permanently Sealed**—Dirt is excluded and lubricant retained by patented centrifugal seal.
- **Pre-Lubricated**—SealMasters are shipped with lubricant sealed in—ready for installation.
- **Self-Aligning**—SealMasters reduce mounting cost—Shaft misalignment cannot distort the seal.
- **No Housing Wear**—Rotation of outer race in housing is prevented by patented locking pin which positions unit for relubrication.

Pillow Blocks
Take-up Units
Flange Units
Cartridge Units
Flange Cartridge Units

WRITE FOR CATALOG No. 845

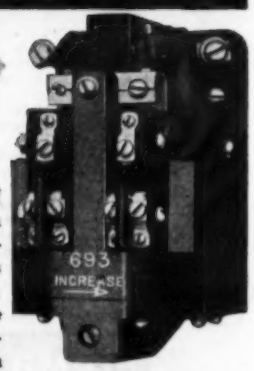
STEPHEN S-A DAMSON Mfg. Co.
12 Ridgeway Ave., Aurora, Illinois Los Angeles, Calif. - Belleville, Ont.

Factory Representatives and Dealers in All Principal Cities

Mention Item NED-4877 when writing

2 New Timers
CUTLER-HAMMER
• SMALL SIZE
• EASY TO ADJUST
• ACCURATE AND DEPENDABLE

Bulletin 10337
A. C. Pneumatic Timer



Designed for a broad variety of industrial control timing needs, such as machine tools, conveyors, automatic processing equipment, etc. Its extremely small size, 2¾ wide x 4⅞ high makes it desirable where space is at a premium. Its timing adjustment is especially simple, made with a screw driver from the front. 8 turns of the screw gives the entire timing range from 0.3 seconds to 3 minutes. Reset is practically instantaneous. Available either with one timing step or two timing steps, the two steps eliminate the need of one timing relay. The two steps of timing are independently adjustable over the entire range.

Bulletin 13522 General Purpose Electronic Timer

For use particularly where short or very accurate timing is required. The standard unit has a wide timing range, from 0.15 to 60 seconds. Shorter time settings or narrower ranges can readily be provided for special applications. Timing adjustment is easily made by turning knob of potentiometer rheostat which is equipped with a clearly graduated dial. The rheostat may be located inside the timer enclosure or at any convenient place on the machine remote from the timer. A heavy duty industrial type relay is used in the timing circuit. An outstanding feature is the extreme accuracy of the unit on repeat operations and under varying ambient temperature conditions.

For further information on Bulletin 10337 pneumatic timer, or Bulletin 13522 electronic timer, write CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto, Ont.

CUTLER-HAMMER MOTOR CONTROL C-H

Mention Item NED-4878 when writing

SAVE TIME... STORAGE SPACE ...AND AVOID SPILLAGE

with TELLEVEL AUTOMATIC BIN-LEVEL CONTROL

Let TELLEVELS watch your bin-level for you . . . Avoid empty or overflowing storage bins.

Mount a TELLEVEL near the top and another near the bottom of your storage bin . . . As the material-level falls or rises, the light pendant is pushed aside . . . Automatically *starts or stops* conveyor, elevator or pump . . . Can be furnished for bulk materials or liquids.

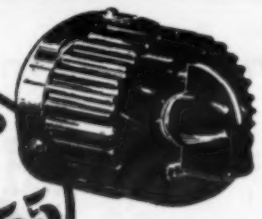
Check possible uses. Write now for Bulletin No. 440.

STEPHENS-ADAMSON MFG. CO.

Tellevel-Bin Level Controls · Saco Speed Reducers · Car Loaders · Car Pullers · Winches · SealMaster Ball Bearings

12 RIDGEWAY AVE., AURORA, ILLINOIS

▲ Mention Item NED-4879 when writing ▲



APPROVED FOR AN3155

This Rheostat SURPASSES U. S. Aircraft Specifications

Designed especially for government planes, IRC Type PRT Rheostat meets the most rigid Army-Navy AN3155 specifications—and actually exceeds them in certain respects! It also meets Army approval for type RP-11 and RP-16, and carries the AAF "Approved Quality Control Rating."

Type PRT Rheostats operate safely, at full rating, down to 25% of full rotation with only minor rise in temperature. *All-metal* construction assures extreme resistance to shock, vibration or breakage. Heat dissipating properties of aluminum are fully utilized in the housing, and on the winding core of the resistance element. Mechanical improvements give increased electrical safety margins.

Our new Catalog Bulletin E-1 is yours for the asking. Send for your reserved copy today.

IRC — Power Resistors • Precisions • Insulated Composition Resistors • Low Wattage Wire Wounds • Rheostats • Controls • Voltmeter Multipliers • Voltage Dividers • HF and High Voltage Resistors

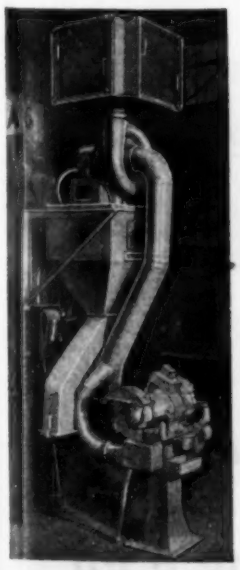
INTERNATIONAL RESISTANCE COMPANY

401 N. Broad St., Philadelphia 8, Pa.

In Canada: INTERNATIONAL RESISTANCE COMPANY LTD., TORONTO, LICENSEE

▲ Mention Item NED-4880 when writing ▲

There's always room for a ROTO-CLONE



Modern Dust Control Equipment Designed to Fit the Space and the Job

• This two wheel grinding stand, although placed in a crowded center-of-plant location, is serviced by a wall mounted Type D Roto-Clone. Dust-laden air is removed at the hoods, conveyed to the Roto-Clone where the dust is separated and delivered into the hopper and the air is passed through a final aftercleaner and recirculated to the workroom. A complete, compact operation utilizing unused wall space and designed for disposal of collected dust at floor level. Bulletin 270-A describes this as well as the complete line of Roto-Clone Dust Control Equipment. Write for it today.

AMERICAN AIR FILTER CO., INC.
391 Central Ave., Louisville 8, Ky.

AAF

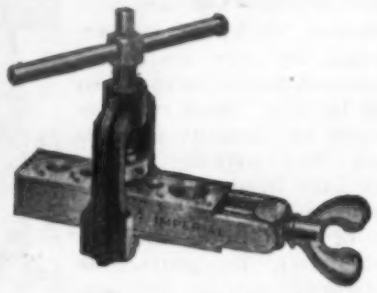
In Canada: *Darling Bros., Ltd., Montreal, P. Q.*

ROTO-CLONE DUST CONTROL

▲ Mention Item NED-4881 when writing ▲

TUBE FLARING TOOL

Soft copper, brass and aluminum tubing can be flared for SAE joints in 1/4, 5/16, 3/8, 1/2 and 5/8-inch outside diameter sizes by means of this Hi-Duty flaring tool. Die holder has sliding dies. Thumb screw at end is tightened to clamp tubing securely in position. Yoke then slides directly over end of holder, is positioned over tubing to be flared, and is tightened. Flaring is accomplished without scoring tubing because of deep, smooth-surface die blocks. Die assembly is fabricated of heat-treated steel, and yoke is forged. Tool is priced at $5.20. Made by **Imperial Brass Mfg. Co.,** 1200 W. Harrison St., Chicago 7, Ill.



▲ Mention Item NED-4882 when writing ▲

CONDENSATE RETURN UNIT

Vertical type Hotshot condensate return unit is available in sizes designed to handle from 500 to 10,000 square feet of direct radiation against pressures from 10 to 55 pounds. It is compact and requires minimum amount of floor space. Entire pumping unit and jet can be removed from tank for cleaning without disturbing piping. Automatic control is provided by single-pole, vertical, fully enclosed and sealed magnetic switch. Ball bearing, solid shaft, capacitor type 110-220-volt motor has built-in Thermatron and automatic reset for overload protection. Made by **Deming Co.,** Dept. NE, Salem, O.

▲ Mention Item NED-4883 when writing ▲

ADJUSTABLE PIPE THREADER

Designed for use with power drives, this adjustable Beaver 77 Power Drive threader has pipe size range of 1/2 to 2 inches and uses same heavy duty high-speed steel dies as are used in Beaver models A and B pipe and bolt machines. When thread is finished, dies are thrown open, thus eliminating back-off over finished threads. Dies will cut standard, over-size or under-size threads to compensate for variation of pipe fittings. Easy-working self-centering chuck centers pipe accurately to assure straight threads and when throw-out handle is closed, dies are returned to original cutting position. Multiple threads can be cut to uniform size. Made by **Beaver Pipe Tools, Inc.,** 333 Henry St., Warren, O.

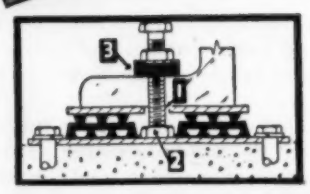
▲ Mention Item NED-4884 when writing ▲

VIBRATION

PROTECT ALL TYPES OF MACHINES WITH "FINNFLEX" VIBRATION DAMPNERS

FINNFLEX offers practical tested methods of isolating machine vibration.

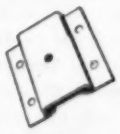
Built on "Rubber - in - Shear" principle for *maximum efficiency.* High grade rubber inserts are held in place by steel retaining brackets. *Easy to install. Economical. Efficient.* Sturdy, practically indestructible.



CM SERIES, engineered Vibration Dampners for *horizontal, rotary or vertical vibration.*

Plus **"SHOCKMOUNTS"** for **IMPACT MACHINERY**

Send us your problem. Write for 4-PAGE ILLUSTRATED FOLDER and PRICE LIST



FINN & CO. 2844 Eighth Avenue New York 30, N. Y.

▲ Mention Item NED-4885 when writing ▲

Photo Courtesy Ralph N. Brodie Co., Oakland, Calif., Makers of Petroleum Meters

Low Reject Heat Treatment For HIGH GRADE PARTS

Gas cyaniding, Carburizing, Nitriding and Tempering for all metal parts are done with outstanding uniformity by the Homo Method. Specially good for big or dense loads. Let an L&N engineer give details.

LEEDS & NORTHRUP COMPANY, 4906 STENTON AVE., PHILA. 44, PA.

LEEDS & NORTHRUP

MEASURING INSTRUMENTS · TELEMETERS · AUTOMATIC CONTROLS · HEAT-TREATING FURNACES

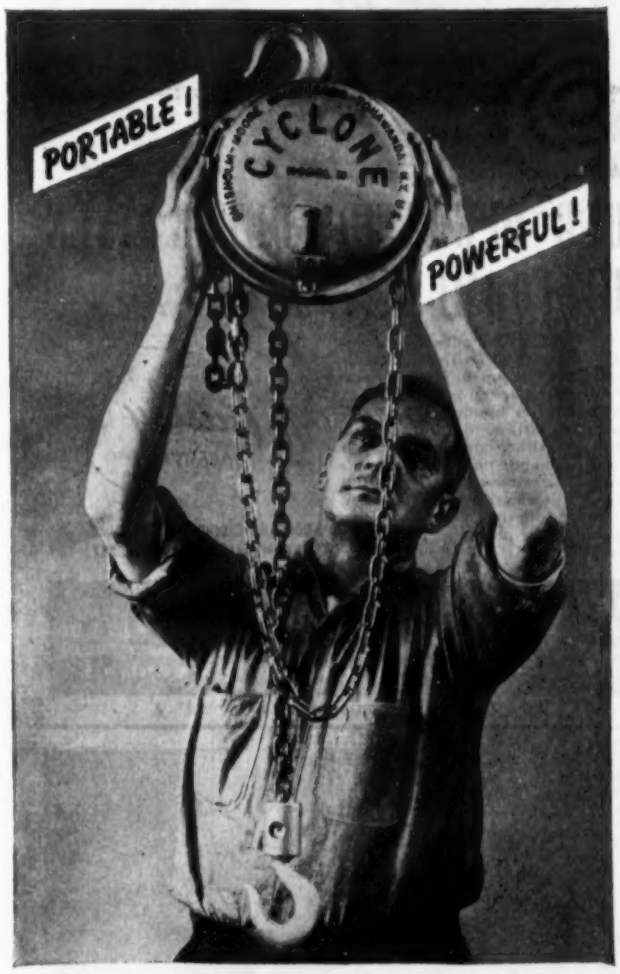
Jrl Ad T-620(24a)

▲ Mention Item NED-4886 when writing ▲

NEW! CM CYCLONE

Model M HEAVY DUTY HIGH SPEED HOIST

Capacities from ¼ ton up



96% EFFICIENCY... Conserves worker energy and increases productivity

42% FEWER PARTS... Simplifies maintenance

63% LESS WEIGHT... 1 ton weighs only 35 lbs. 2 ton weighs only 59 lbs. 3 ton weighs only 90 lbs.

Plus **SEALED-IN LIFETIME LUBRICATION** prolongs life . . . reduces wear—*Plus* **HERC-ALLOY** America's First and Safest Steel Load Chain.

The CM Cyclone Model M, constructed of today's stronger alloys of steel and Alcoa Aluminum, is years ahead as a production and maintenance tool. New type load brake with smooth, positive control aids in spotting and assembly work. Thousands of these extra value hoists are already in service, daily demonstrating their superior performance.

Ask your distributor to show you the new Cyclone Model M Hoist

CHISHOLM-MOORE HOIST CORPORATION

(Affiliated with Columbus McKinnon Chain Corporation)

GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.

SALES OFFICES: New York • Chicago • Cleveland • San Francisco • Los Angeles

See us at Booth 116 National Safety Congress, Stevens Hotel, October 18 to 22, Chicago

▲ Mention Item NED-4887 when writing ▲

Only Skylift Trucks Give You HIGH PRESSURE Hydraulic Lift!

With Automatic's exclusive patented design, using *high pressure* hydraulics, you can *raise forks to maximum height of single lift*, before increasing overall height of uprights. Forks raise *67 inches before uprights begin to extend!*

Pictures at left show how easily you get entry into box cars and other low clearance portals. Tier to maximum height without uprights jabbing into ceilings. Same Skylift also tiers up to 130 inches high, giving you a complete handling system for both LOW and HIGH CLEARANCE moving and tiering. This is not possible with *low pressure* systems.

Only Automatic Gives You "BURN-OUT PROOF" Silicone Insulated Motors

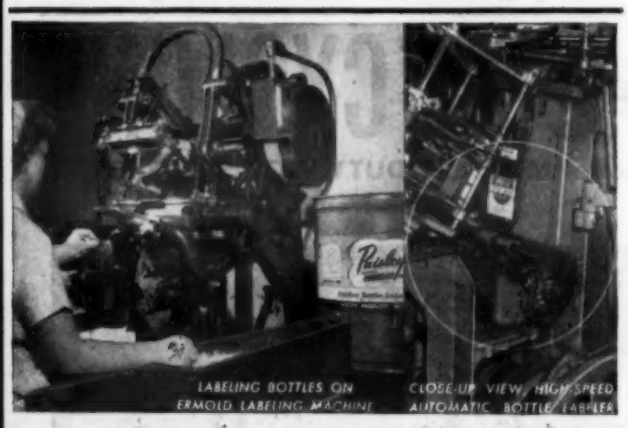
Skylift Electric Trucks give you SILICONE MOTOR INSULATION. This is an exclusive silicone varnish and silicone lubricant that protects Skylift motors, even if overloaded, and even after exposure to 300 to 400 degrees fahrenheit.

This means no armature or field coil failure due to overheating, no interruption of Skylift's efficient operation. Write for facts.

Skylift ELECTRIC TRUCKS A PRODUCT OF AUTOMATIC

AUTOMATIC TRANSPORTATION CO.
DIV. OF THE YALE & TOWNE MFG. CO.
61 W. 87th St., Dept. K-8, Chicago 20, Ill.

▲ Mention Item NED-4888 when writing ▲



YOUR OPERATION DETERMINES THE FORMULA.. *when you use*

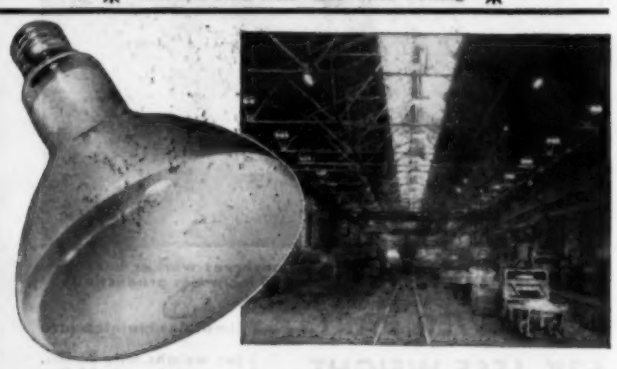
WHATEVER your adhesive operation "Put it up to Paisley!" Regardless of (1) the type or speed of machine or hand operation; (2) kind of materials to be bonded; (3) type of container surface to be sealed or labeled, or other consideration; you can depend upon our laboratories to develop the *one best* Adhesive for the job. We invite you to use Paisley Scientific Adhesive Service for *better results* in your gluing or packaging operations.

Paisley SCIENTIFIC ADHESIVE SERVICE

DON'T WAIT. SEND FOR FREE ADHESIVE OPERATION DATA SHEET TODAY!

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.

▲ Mention Item NED-4889 when writing ▲



STAYS BRIGHT WITHOUT CLEANING in foundry smoke and dirt!

BECAUSE the mirrored reflecting surface is fully protected *inside* the bulb itself, dust and dirt have little effect on the light output of G-E reflector lamps. With the lamp mounted in the usual base-up position, little or no light obstructing material collects on the bottom surface.

G-E REFLECTOR LAMPS eliminate cleaning costs—keep lighting conditions adequate for safety and maximum production. 150 and 300 watt sizes.

G-E LAMPS

GENERAL ELECTRIC

▲ Mention Item NED-4890 when writing ▲

ALUMINUM STEPLADDER

Heavy-duty millwright type aluminum stepladders are designed for hard usage in mills and factories and for construction work. Steps are formed by two corrugated aluminum ladder rungs placed side by side. Each rung assembly has capacity of more than 1000 pounds. Ladder legs have insulated nonabrasive bases, and folding braces are of heavy-gage cadmium-plated steel. Top platform is waterproof marine plywood. Available in lengths from 4 to 16 feet, ladders fold in same manner as conventional stepladder. Made by **Louisville Metal Products Co.**, 1101 W. Oak St., Louisville, Ky.

▲ Mention Item NED-4891 when writing ▲

DRILL PRESS ANGLE VISE

Available with or without swivel base, Yankee angle vise is ground on both sides, front end and bottom and is designed for use on milling machines, drill presses and other machine tools. Method of angle adjustment permits use of full capacity of jaw opening. Swivel base can be locked securely in any position by means of lever. Vise can be attached or detached from machine tool without disturbing workpiece. Each unit is equipped with V-block for holding round stock, and 90-degree scale is stamped on side to facilitate proper setting for angle of work. Maximum jaw openings are 1-15/16 and 3 inches. Made by **North Bros. Mfg. Co.**, Lehigh Ave. & American St., Philadelphia 33, Pa.

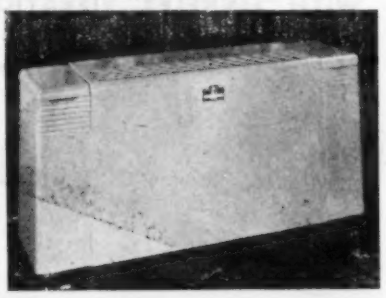
▲ Mention Item NED-4892 when writing ▲

OPEN-END RATCHET WRENCH

Designed for use on pipe, tube, conduit, cable and rod fittings where ordinary ratchet will not fit, this T-A-C open-end wrench head will operate in 7-1/2-degree arc or less. Heads, sockets and accessories are available separately or in sets in practically all sizes, and standard ratchet wrench handles can be used to apply pressure. Smallest wrench will withstand 2000 inch-pounds torque. Made by **C. J. Hendry Co.**, 27 Main St., San Francisco, Calif.

▲ Mention Item NED-4893 when writing ▲

ROOM AIR CONDITIONER



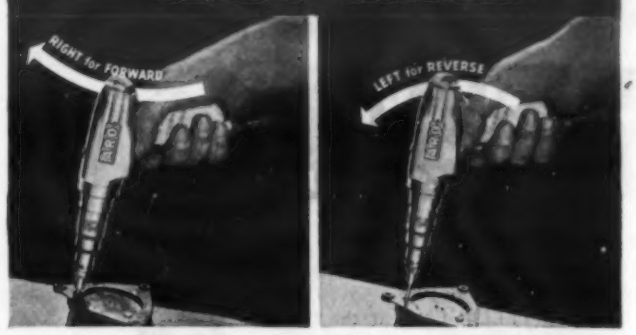
Floor type, remote room air conditioner designed for use in industrial and commercial offices has maximum air flow of 450 cubic feet per minute. Air is not only cooled, but is dehumidified, filtered and circulated. Nominal capacity is 10,000 to 15,000 British thermal units per hour. Cabinet is finished in gray baked enamel and is equipped with four adjustable legs to assure proper leveling on uneven floors.

Cooling unit is constructed of 5/8-inch copper tubes and fins. Fans are powered by 1/8-horsepower, 115-volt, single-phase motor. Operating controls and expansion valves are accessible at each end of cabinet under removable 'snap-on' cover plate.

Output air is diffused through grille which is adjustable for both vertical and lateral air distribution. Ventilation can be secured by floor ducts, through wall behind, or in other acceptable ways. Amount of recirculated and ventilating air can be controlled. Conditioners can be installed in single or multiple arrangement according to individual requirements. No special wiring is required. Made by **General Motors Corp.**, Frigidaire Div., Dayton 1, O.

▲ Mention Item NED-4894 when writing ▲

New ARO Reversible SCREW DRIVER!



Save Time... Increase Production

Change instantly from forward to reverse—just turn button on rear of motor housing. This new tool, Model 7091, has big power and high driving torque—ideal for No. 1 to 14 machine and wood screws and ¼" nuts. Adjustable friction clutch. Low working speed of 750 r.p.m. insures perfect contact with screw slot and prevents marring of screw heads. New housing design gives perfect balance...ease of handling. Feature by feature—one of the finest Aro Tools ever built! Ask your Aro Jobber or write... The Aro Equipment Corporation, Bryan, Ohio.

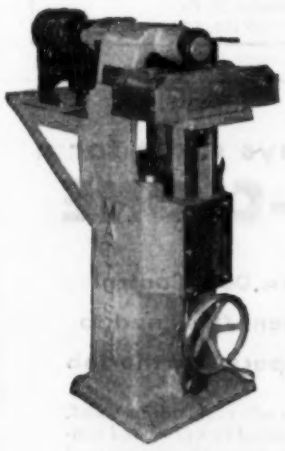
ARO AIR TOOLS

▲ Mention Item NED-4895 when writing ▲

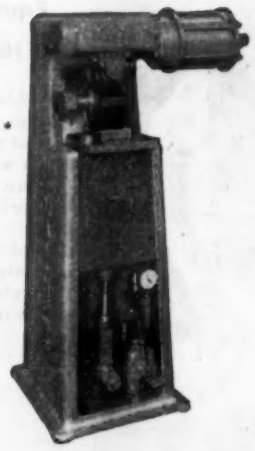
cut your marking costs with a MATTHEWS 204

You can produce deep, uniform and legible markings on round or flat parts more quickly and with lower costs when you use one of Matthews model 204 marking machines. There's one which will meet your needs exactly.

204 MANUAL



204 MOTORIZED



204C FULLY PNEUMATIC

Write for Bulletin B-3 for complete details.

JAS. H. MATTHEWS & CO.
3943 FORBES STREET PITTSBURGH 13, PA.
BRANCH PLANTS
NEW YORK, BOSTON, CHICAGO, PHILADELPHIA, NEWARK, SYRACUSE
District Sales Offices: Cleveland, Cincinnati, Birmingham, Dallas

▲ Mention Item NED-4896 when writing ▲

New Conditions—
New Products—call for
Brightboy!

Try versatile rubber-cushioned Brightboy in close tolerance, precision finishing on:

STAINLESS STEEL
MONEL • DURAL
ALUMINUM
COPPER • BRASS

Brightboy's rubber and abrasive combination is unbeatable for regular and special surfacing, finishing and polishing—in fewer operations—at substantial time savings! Ask your distributor for prices and catalog manual. Write the Brightboy Service Department on specific problems or for new methods data.

BRIGHTBOY
INDUSTRIAL DIVISION
WELDON ROBERTS
RUBBER CO.
Newark 7, N. J.

AIRCRAFT, AUTOMOTIVE & INSTRUMENT PARTS & COMPONENTS are but a few of many categories where you'll get results at substantial savings.

WELDON ROBERTS Brightboy
FURBING • FINISHING • POLISHING IN ONE OPERATION

Mention Item NED-4898 when writing

TOUGH BOLTS
for rugged work!

These big, rugged bolts, made from high carbon or alloy steel, with special heat-treatment, are the "work horses" that handle unusually tough fastening jobs. They withstand stress, shear, fatigue and impact.

With the wide variety of equipment used to make the most complete line of bolts, nuts, screws and other fasteners, "National" has the facilities to supply you with the right fasteners (large and small, standard or special) to make your products fit better—stay tighter—or operate more smoothly. Special fasteners, made by "National's" upset, cold headed process, prove stronger and cost less.

National HEADED AND THREADED PRODUCTS

THE NATIONAL SCREW & MFG. CO., CLEVELAND 4, O.

Mention Item NED-4899 when writing

Logan A NAME TO REMEMBER WHEN YOU THINK OF BETTER LATHES AND SHAPERS

Quick Change
Gear Cabinet
Turret Lathe

Logan Lathe prices start at $159.50

PRECISION BUILDING

Gives Logan Lathes Sustained Accuracy and Lasting Dependability

• V and flat ways of the heavy-ribbed Logan Lathe bed are held to within .0005" of parallelism. The front bearing seat on the Logan Lathe ball bearing mounted spindle can vary no more than .0002". Total spindle runout 12 inches from the bearing is less than .0008". To hold to tolerances like these, one of every seven men building Logan Lathes is an inspector, skilled in the use of the most modern precision instruments. Operations, individual parts, sub-assemblies and completed machines are checked. That is why the Logan Lathe has earned a reputation for sustained accuracy and dependable, low-cost service in all fields of industry. Write for full information on the complete line of Logan Lathes and Shapers. S-3

SPECIFICATIONS COMMON TO ALL LOGAN LATHES . . . swing over bed 10½" . . . bed length, 43⅛" . . . size of hole through spindle, ⅝" . . . spindle nose diameter and threads per inch, 1½"—8 . . . 12 spindle speeds, 30 to 1450 rpm . . . motor, ½ hp, 1750 rpm . . . ball bearing spindle mounting . . . drum type reversing motor switch and cord . . . precision-ground ways, 2 V-ways and 2 flat ways.

DISTRICT OFFICES: Woolworth Bldg. New York 7, N.Y. CO 7-8024 · 550 W. Washington Blvd. Chicago 6, Illinois Central 1246 · 2516 N. Ontario St. Burbank, Calif. Charleston 8-1024 · 700 Commerce St. Dallas 2, Texas Central 4075

LOGAN ENGINEERING CO. CHICAGO 30, ILLINOIS

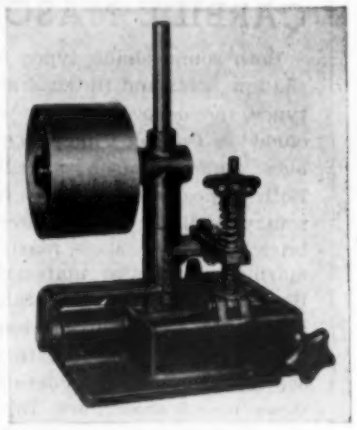
Mention Item NED-4900 when writing

MICROMETER LATHE DIAL

Available on all new Springfield lathes and suitable for use on many older models, TriSet direct-reading micrometer cross feed dial permits selection of any one of three individual direct readings for turning, boring or depth of cut. Readings in 0.001-inch increments are given through individual windows selected with knurled ring at front of indicator housing. Each of the three settings for outside diameter, inside diameter and depth of cut is read on one dial through its individual window. All other markings are hidden. Made by **Springfield Machine Tool Co.**, 402 W. Madison St., Springfield, O.

Mention Item NED-4901 when writing

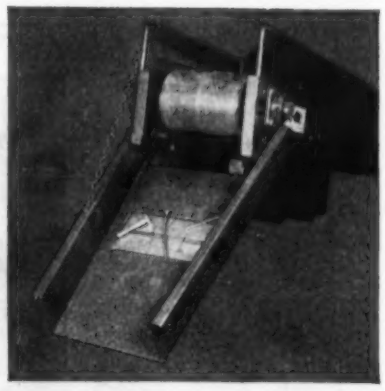
BENCH TYPE BACKSTAND



Bench type model 6-B backstand has 8-inch pulley and 4-inch abrasive belt capacity. Heavy cast-iron base is drilled for mounting, and convenient tension release lever facilitates rapid changing of belts. Balanced aluminum pulley is mounted on permanently sealed and lubricated precision ball bearings. Spring-loaded belt tensioning adjustment is controlled by hand screw. Backstand is especially suited for limited-space mounting. Made by **Hammond Machinery Builders Inc.**, Dept. GP-22, 1600 Douglas Ave., Kalamazoo 54F, Mich.

Mention Item NED-4902 when writing

MAGNETIC CONVEYOR CHUTE

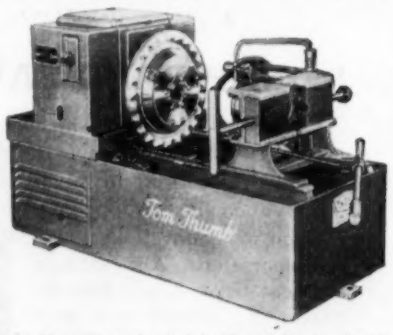


Available on all lightweight Tote-All bulk material conveyors, adjustable chute is equipped with Alnico permanent magnets to trap nuts, bolts, nails and wire which may be in conveyed material. Chute can be attached or removed as required and protects machinery from damage by tramp iron, helps eliminate product contamination, and reduces danger of fire and explosion caused by friction sparks. Maximum recommended speed for efficient operation of magnet is 100 feet per minute. Made by **Material Movement Industries, Inc.**, 9257 Laramie Ave., Skokie, Ill.

Mention Item NED-4903 when writing

PIPE & BOLT THREADER

Pipe ranging from ¼ to 2-inch size and bolts from ¼ to 1½ inches in diameter can be threaded by electrically powered Tom Thumb No. 582 threading machine. Extra range is 1/8-inch pipe, and with special drive shaft, 2½ to 8-inch pipe can be handled. Machine incorporates Spin-fast front chuck which chucks and unchucks pipe instantly upon spin of hand wheel. Having three universally centering and quick-acting jaws, rear chuck insures straight threads on long lengths. Quick-opening, adjustable floating type die head has top opening to permit view of thread as it is cut and bottom opening to allow chips to fall in pan. Dies are of long-lead type for easy starting and cutting, and are adjusted simultaneously.



Machine is regularly equipped for bench use but can be supplied with wheeled stand for portability. It is driven through V-belts by universal, reversible, variable speed motor operating on 110-volt alternating or direct current. Certain other voltages can be furnished on request. Made by **Oster Mfg. Co.**, 2066 E. 61st Place, Cleveland 3, O.

Mention Item NED-4904 when writing

Introducing NEW FLEXIBILITY

Any Speed . . .
Any Enclosure . . .
A-c. or D-c. . .

. . . with the RELIANCE GEARMOTOR

Any type enclosure of Reliance A-c. or D-c. Flange-mounted *Precision-Built* Motor may be chosen. A full selection of speeds from 4 to 1,430 rpm. is offered with motor ratings from 1 to 60 hp. For details of the many advances in design behind the superior performance of this sturdy, compactly constructed Reliance GearMotoR, write today for Bulletin C-404.

Built by RELIANCE ELECTRIC & ENGINEERING COMPANY and PHILADELPHIA GEAR WORKS, INCORPORATED

RELIANCE ELECTRIC & ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Representatives in Principal Cities

Mention Item NED-4905 when writing

GROUP SHOWERS SIMPLIFY INSTALLATION

Bradley Multi-Stalls are the practical shower for industrial installations—whether in existing structures, new plants, or expanded facilities. They are compact, sturdy, economical, and sanitary. They come partially assembled, with or without Receptors, for quick, easy installation on any kind of floor including wood. One Bradley "5-Stall" Unit requires only three supply lines—hot water, cold, and drain in comparison to 15 plumbing connections needed for five conventional "single-stall" showers. In addition hot water costs are less and total water consumption reduced. Write for illustrated Catalog 4701 to BRADLEY WASHFOUNTAIN CO., 2253 W. Michigan Street, Milwaukee 1, Wisconsin.

Distributed Through Plumbing Wholesalers

BRADLEY multi-stall showers

Mention Item NED-4906 when writing

MINERAL-FREE WATER COSTS CUT 94%!
. . . FILT-R-STIL* Demineralizer Pays for Itself in 3 Months at J. T. Baker Chemical Company

By using one of Cyanamid's FILT-R-STIL Demineralizers, the J. T. Baker Chemical Company has reduced the cost of producing mineral-free water from approximately $5.00 per thousand gallons to $0.265 per thousand—a saving of approximately $757.00 per 24-hour operating day! And, in terms of ionized solids, the demineralized water obtained is equal to or better than the distilled water formerly used.

Many companies throughout industry are using this same no-heat method of producing mineral-free water at a fraction of the cost of distillation. Take the first step *now* to get demineralized water to meet *your* special requirements, almost as easily, quickly, and abundantly as turning on tap water.

Investigate Cyanamid's FILT-R-STIL Demineralizers. Fill in and mail coupon.

ION EXCHANGE PRODUCTS DEPT.

FILT-R-STIL* Demineralizers
IONAC* Ion Exchange Resins
*Reg. U. S. Pat. Off.

AMERICAN CYANAMID COMPANY

NED 9

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

☐ *Send 26-page booklet, "FILT-R-STIL Demineralizers."*
☐ *Send data on low-cost Silica-free water.*
☐ *Send description of new film on water demineralization.*

Name.....
Company.....
Address.....
City and State.....

Mention Item NED-4907 when writing

NEW SILACRON FLOOR CEMENT

PERMANENT REPAIRS IN 6 HOURS

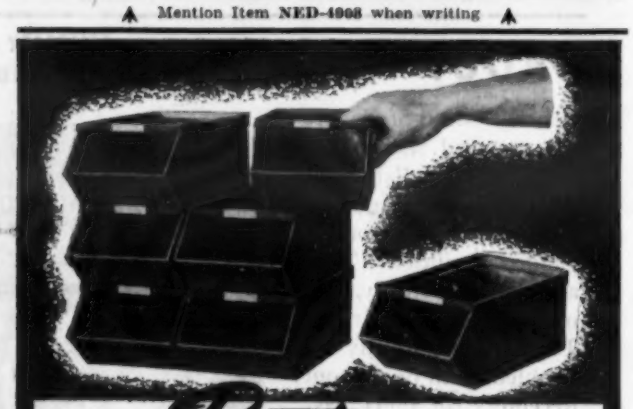
★ Self bonding.
★ No asphalt or "mastic"
★ Absolutely impervious to oil.
★ Will not rut—easy to truck on.
★ Outwears concrete four to one.
★ Ready mixed—easy to apply.

Ask for Bulletin No. 122

DO IT RIGHT WITH HALLEMITE

THE HALLEMITE MANUFACTURING CO.
CLEVELAND 13, OHIO

Mention Item NED-4908 when writing



Parts...

★ Where You Want Them . . .
★ When You Want Them

You'll save time, space and labor handling parts and material when you use these patented STACKBINS. STACKBINS keep parts instantly accessible—eliminate waste hand motions—stack compactly to form units of exactly the right shape and capacity—make order filling or assembly work faster, easier, more efficient. Heavy steel, all-welded construction.

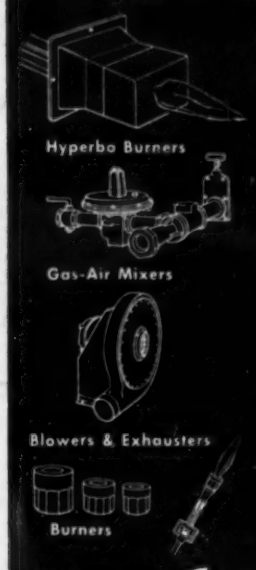
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa.

Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

Mention Item NED-4909 when writing

Everything! IN INDUSTRIAL COMBUSTION EQUIPMENT



One Item or a Complete System

With competitive days ahead you will want your heating processes at top efficiency, with lowest operating costs. Correct engineering and installation, plus continued servicing by *COMBUSTION SYSTEMS*, make this possible—a complete service from planning to installation and maintenance.

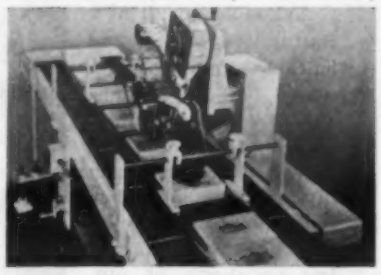
Whether it's a single item you need, or a complete firing system, both are available from *COMBUSTION SYSTEMS*—headquarters of industrial combustion equipment: *NATIONAL* gas burners, high- and low-pressure mixers, air heaters, immersion heaters, varnish fires, valves and controls.

Save your time and trouble—get everything from a single source.

COMBUSTION SYSTEMS
DIVISION OF VAPOFIER CORP.
10322 SOUTH THROOP ST., CHICAGO 43, ILLINOIS

Mention Item NED-4910 when writing

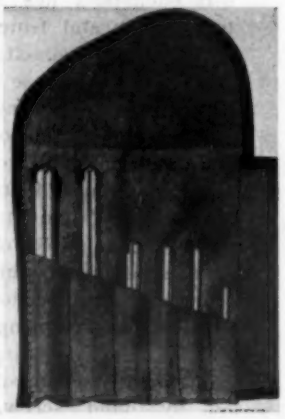
LABELING MACHINE



Using die-cut labels in roll form, Thermo-Print-Labeler automatically cuts each label; imprints it with price, date, code or other information; applies heat to make thermoplastic coating adhesive and seals it firmly in desired position on package. Circular brush passes over label to assure tight seal even on irregular surface. Depending upon product to be labeled, speed varies from 20 to 60 pieces per minute. Labels will adhere to paper, cellophane, wood, metal, textiles, glass and virtually any other type of surface. Infeed conveyor accommodates products from 3 to 18 inches long, 2 to 10 inches wide, and 1 to 6 inches high. Printed message can vary in size up to 2¼ inches wide by ½ inch high and can be changed quickly by inserting new printing plate. Made by **Package Machinery Co.**, Springfield 7, Mass.

Mention Item NED-4911 when writing

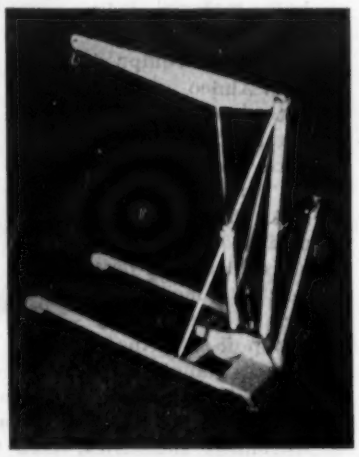
CARBIDE MASONRY DRILLS



Both round shank types for shallow holes and fluted shank types for deep holes are included in Carboloy line of carbide tipped masonry drills. Both types are suitable for rotary drilling in concrete, brick, limestone, slate, plaster, marble and similar materials. Illustrated kit No. 1 contains six round shank drills ranging in diameter from 3/16 to 5/8-inch. Kit No. 2 contains three round shank and three fluted shank drills in six sizes ranging from 3/16 to 5/8-inch. Large size kit No. 3 for universal drilling contains two round shank and four fluted shank drills ranging in diameter from ¼ to 3/4-inch. Drills are also packaged individually or in quantities of same size. Made by **Carboloy Co.**, 11163 E. Eight Mile Rd., Detroit 32, Mich.

Mention Item NED-4912 when writing

PORTABLE FLOOR CRANE

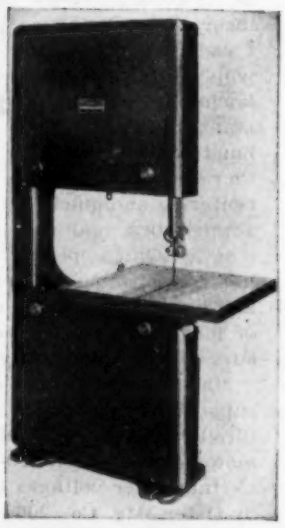


Capacity of this portable floor crane is 1 ton. It is recommended for use in factories and warehouses for handling drums and castings and for other materials handling jobs as well as providing support during assembling operations. Rough floors, sudden obstructions and sharp turns will not tip crane. Guiding handle also serves as pumping lever, and it operates twin pumping cylinders for fast 'no-load' action and powerful load lifting.

Dual valve controls on handle and mast permit load to be lowered accurately into place from any convenient working position. An auxiliary handle can be used for pumping from load position. Detachable at base, crane can be adapted to carriages of various widths or permanent mountings. Made by **Manzel Inc.**, 315 Babcock St., Buffalo 10, N. Y.

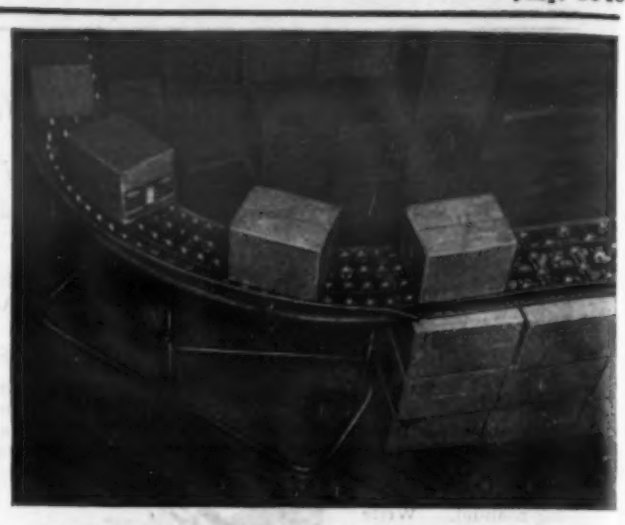
Mention Item NED-4913 when writing

14-INCH BAND SAW



Large, all-purpose 14-inch model B-4000 band saw is suitable for working in wood, metal and plastics on production jobs as well as short-run operations. All castings are heat treated, and heavily ribbed 14 x 14-inch table surface is ground smooth. Table tilts 45 degrees right and 15 degrees left. Dynamically balanced Neoprene wheel tires are resistant to oil, and precision ball bearings are lubricated for life. All adjustments are simple and easily made. Machine has list price of $84.50. Made by **Foster Mfg. Co.**, 1 Kinsey Ave., Buffalo 17, N. Y.

Mention Item NED-4914 when writing



RAPID-WHEEL* ALUMINUM
portable gravity conveyor

You'll appreciate the light weight of Rapid-Wheel aluminum conveyor. No sacrifice in strength . . . or in the work it does. For outdoor work its resistance to weathering makes it ideal. Both straight sections and curves in a variety of lengths and widths available for immediate delivery. Get the details today.

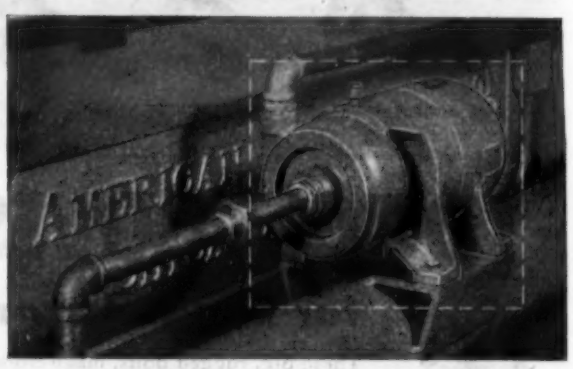
THE RAPIDS-STANDARD CO., INC.
378 Rapistan Bldg., Grand Rapids 2, Mich.
Representatives in principal cities

*T.M.

RAPISTAN
MATERIAL HANDLING EQUIPMENT

Mention Item NED-4915 when writing

KEEP TOOLS COOL THE FULFLO WAY



FULFLO

Write on your letterhead for FULFLO MECHANICAL DATA BOOK

CENTRIFUGAL COOLANT PUMPS

ACTION is direct . . . simple . . . dependable! Tools last longer, work is better . . . your cooling problem is licked from the start. Economical! Easily installed . . . practically no maintenance.

Illustrated is Model AG6M mounted on heat exchanger in tube mill manufactured by American Electric Fusion Corporation, Chicago . . . numerous models available suitable for YOUR plant, too.

THE FULFLO Specialties Co., Inc.
BLANCHESTER, OHIO

Mention Item NED-4916 when writing

IF YOU WANT ELECTRONIC HEAT CONTROL...

SEND FOR THIS BOOK

Here's the story of the simplified, moderately priced Alnor Electronic Pyrometer Controller.

This bulletin describes several of the many advantages in automatically controlling or maintaining heat in industrial furnaces, ovens and kilns—in fact, in all heating devices using electricity, gas or oil. The Alnor Controller is made by instrument technicians, is sensitive enough for laboratory use, rugged enough for grueling industrial service. Today, while you are thinking of it, send for Bulletin No. 3197-C. ILLINOIS TESTING LABORATORIES, INC., Room 529, 420 N. La Salle Street, Chicago 10, Illinois.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

Mention Item NED-4917 when writing

STANDARDIZING ON *Nicholson Valves* PAYS OFF

MAINTENANCE MEN LIST 5 REASONS

A survey of large users of Nicholson cylinder control valves shows these leading reasons for their specification:

1) Special seats, don't cut out.
2) Fast, positive acting.
3) Stuffing box easily repacked
4) Heavy-bodied, take abuse.
5) Neat, installed in any position.

Nicholson control valves are furnished for all mediums — air, gas, steam, water, oil; and for all types of operation—lever, foot, solenoid and motor. Choice of six metal combinations to meet specific needs. Pressures to 5000 lbs.

CATALOG 546

W. H. NICHOLSON & CO. 162 OREGON STREET WILKES-BARRE, PA.

Valves ★ Traps ★ Steam Specialties

Mention Item NED-4918 when writing

FOR LOADS UP TO 5 TONS

Use Ironbound "Safety-Corner" Skids

Ironbound Skid Platforms are famous for durability. New materials—engineered construction—a unit to meet any handling requirement. Special superstructures built for handling materials on production lines or for handling particular products. Ask for help in solving your requirements. Ask for Catalog GP-7.

Illustrated "RolTruk" will handle all cylindrical objects—paper rolls, drums, barrels, kegs, etc. Bulletin RT-8 gives full specifications.

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

Ironbound

SKIDS • SEMI-LIVE SKIDS
DOLLIES • FLOOR TRUCKS

Mention Item NED-4919 when writing

SPRING PRESSES

POWER AND FOOT OPERATED

For riveting, staking, stamping and similar operations on small light parts. Constructed to compensate for variation in thickness of the work and to deliver a UNIFORM BLOW AT EVERY STROKE.

M-110 (illustrated) motor driven to eliminate fatigue factor of foot operated press—similar press M-130, equipped to operate by compressed air.

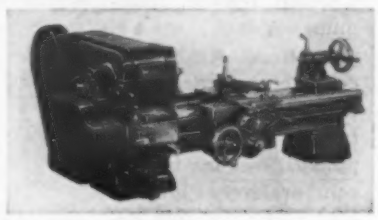
SEND FOR BULLETIN

EST. TF 1834

THE TAYLOR & FENN CO. HARTFORD 1, CONN.

Mention Item NED-4920 when writing

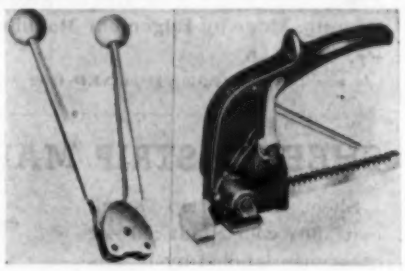
PRECISION BENCH LATHE



Having comparatively low price and features of larger industrial lathes, this Sheldon precision bench lathe has 10-inch capacity and integral horizontal motor drive. Standard collet capacity is ¾-inch, and when nose type collet chuck is used, capacity is 1-inch. Unit is equipped with tapered roller spindle bearings and double-walled worm-feed apron with power crossfeed. Quick-change gear box provides thread cutting range from 4 to 224 threads per inch. Four-step, V-belt motor drive can be powered with either 1/3 or 1/2-horsepower motor. Made by **Sheldon Machine Co.**, 4215 N. Knox Ave., Chicago 41, Ill.

Mention Item NED-4921 when writing

STRAPPING TOOLS



Application of flat steel strapping to packages where strapping operating surface is very limited is facilitated by No. B2AO stretcher and No. C2A sealer. These lightweight tools are especially suitable for insulation application work, and for bundling and tying units of small diameter. They can apply tight steel strap around packages as small as 1 inch in diameter. Made by **Acme Steel Co.**, 2822 Archer Ave., Chicago 8, Ill.

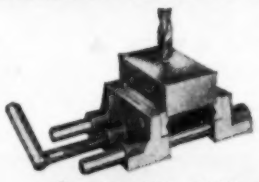
Mention Item NED-4922 when writing

VISIBLE RECORD EQUIPMENT

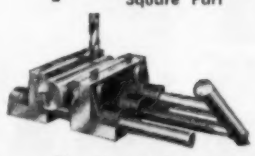
Restyled line of Kardex Imperial visible record equipment incorporates numerous new features including shorter slides for easier access to cards and slide extensions that make removal or insertion a one-hand operation. Units are available in full and half sizes and in widths capable of handling 5, 6, 8 and 11-inch cards. Prescored pockets lie back flat without need for 'breaking in'. In all models, doors can be substituted for top slide, and cabinet can be locked shut to prevent unauthorized entry. Cabinets are finished in Gray-Rite and are complete with Lucite label shields. Made by **Remington Rand Inc.**, Systems Div., 315 Fourth Ave., New York 10, N. Y.

Mention Item NED-4923 when writing

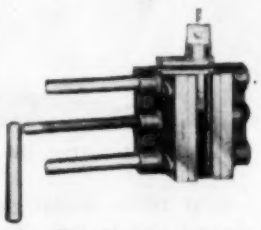
COOK'S 3 WAY



1 Shur-Grip Holding Square Part



2 Shur-Grip Holding Round Part



3 Shur-Grip Holding Rectangular Part

SHUR-GRIP DRILL VISE
Actually 3 Vises in 1

Holds square, rectangular or round parts. Jaws 5" across open up to full 5" wide. Has horizontal V-grooves for holding rounds up to 2" in diameter. Built in parallels for locating flat or rectangular parts. Reduces set-up time on drilling jobs by 75% to 90%.

A Real Pal In The Shop Saves Time and Space!

***Only* $17.00**
ORDER DIRECT!

LAWRENCE H. COOK, INC.
65 Massasoit Avenue, East Providence 14, R. I.

Mention Item NED-4924 when writing

WEDGE *makes...* ALL Types of Tube and Pipe PROTECTORS

COMBINATION PROTECTOR for Delicate Threads — TIN PLUG for Closing of Any Design of Hole — O. D. CAP Will Lock on Smooth Surface

WEDGE makes a complete line of tube and pipe protectors including plugs and caps for protecting conduit. We specialize in work of this kind. WEDGE Protectors are used by many to protect material in transit and are also used for protecting threads of valuable parts while in process and storage. The small cost of WEDGE Protectors is more than offset by the savings they make. It will pay to investigate and find out what WEDGE Protectors can do for you.

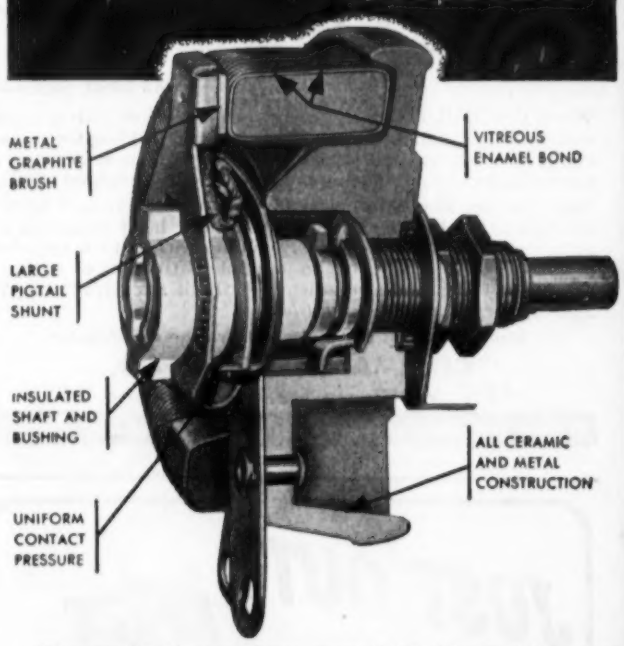
Write for further information.

WEDGE PROTECTORS, INC.
3973 Jennings Road Cleveland 9, Ohio

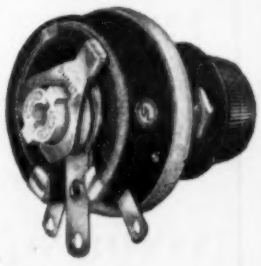
Use WEDGE Chill Rings-Thread Protectors

Mention Item NED-4925 when writing

Years of **UNFAILING OPERATION** *with* **OHMITE** *Rheostats*



Thousands of users have proved it! Ohmite Rheostats provide years of trouble-free service. Constructed of ceramic and metal only, there's nothing to char, burn, shrink, or deteriorate. Vitreous-enamel permanently locks resistance winding in place. Perfect contact is insured by the metal-graphite brush and the large, flat contact surface. You get an uninterrupted connection at all times because current is carried directly to the slip-ring by a pigtail shunt of generous size. A tempered steel contact arm provides uniform contact pressure. For full information, write on company letterhead for Catalog No. 40.



OHMITE MFG. CO.
4841 Flournoy St., Chicago 44, Illinois

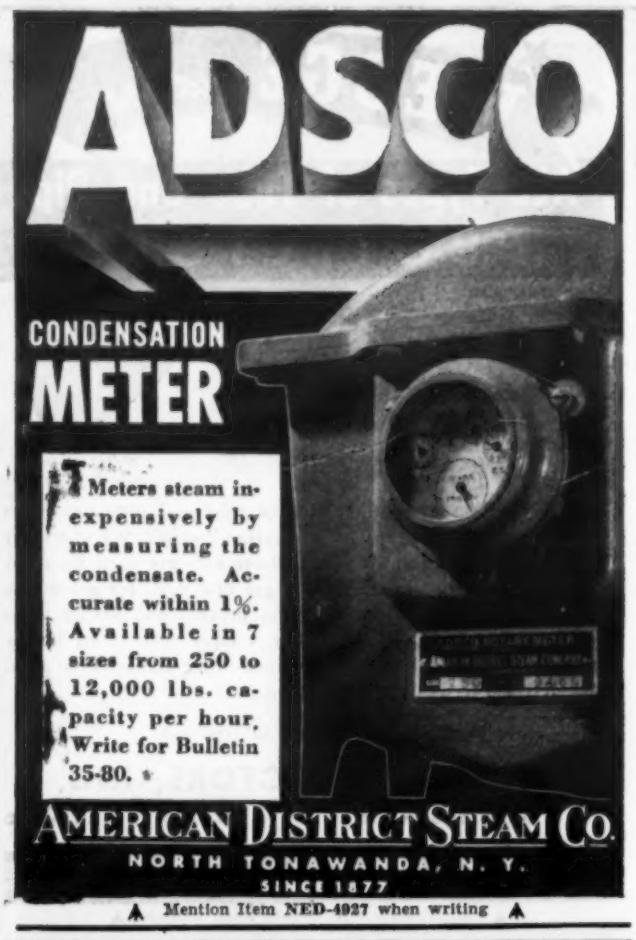
Be Right with **OHMITE**

RHEOSTATS • RESISTORS • TAP SWITCHES

Mention Item NED-4926 when writing

ADSCO

CONDENSATION
METER



Meters steam inexpensively by measuring the condensate. Accurate within 1%. Available in 7 sizes from 250 to 12,000 lbs. capacity per hour. Write for Bulletin 35-80.

AMERICAN DISTRICT STEAM CO.
NORTH TONAWANDA, N. Y.
SINCE 1877

Mention Item NED-4927 when writing

"This multiple drill head has increased our torch cone end production by about 600%."

When this MULTI-DRILL went into operation with a seven-station full automatic step drilling machine, welding torch cone end production at the Victor Equipment Co., manufacturers of gas welding and flame cutting equipment, went up "about 600%."

Why not see how your production can be increased with a MULTI-DRILL—the production drilling head designed for accurate high speed drilling? Available with 2 to 8 spindles; quickly and easily adjusted to any hole pattern on or within a 9" circle; ½" min. center distances. Drill sizes 1/32" to ⅜". *Special adaptations available*

Write for details and name of your nearest Distributor

COMMANDER MFG. CO.
4220 W. Kinzie Street • Chicago 24

Product of *Commander* — Builder of the *Commander Tapper*

Mention Item NED-4928 when writing

JUST OUT!

THE NEW SYNTHANE PLASTICS CATALOG

Interested in new ideas or suggestions that may help improve your product? Here's a new booklet on technical plastics that is full of useful information you won't want to miss.

It gives pertinent data on grades, sizes, properties, applications and forms of Synthane. Acts as a handy reference for planning with plastics.

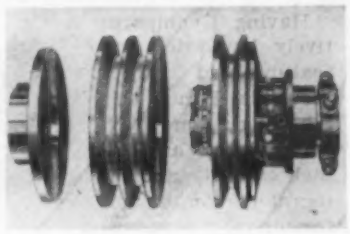
Write for your copy today!

SYNTHANE
TECHNICAL PLASTICS
SHEETS • RODS
TUBES • FABRICATED
PARTS • MOLDED-
LAMINATED • MOLDED-
MACERATED

SYNTHANE CORPORATION
Northeast River Road, Oaks, Penna.
Please send me a copy of the complete Synthane catalog.
Name
Name of Company
Title
Address
City State

Mention Item NED-4929 when writing

V-BELT CLUTCH PULLEY



Quick release, minimum V-belt wear, smooth starting and compactness are features of this self-contained V-belt clutch pulley. Because unit is comparatively low in cost and of simple design, it is suitable for application in motor-powered mowers, lawn sweepers, road markers, garden cultivators, small portable conveyors and other machinery using V-belt or chain drives. Clutch is available in ratings of 1/4 and 1/2-horsepower per 100 revolutions per minute for shaft sizes from 3/4 to 1-1/4 inches with one B-groove of 3-1/2, 4-1/4 and 5-inch pitch diameter or with two B-grooves of 4-1/4 or 5-inch pitch diameter.

When clutch is disengaged, pulley runs freely on shaft. To engage clutch, steel cam moves against liner and engages pulley which is restrained from axial movement by adjusting collar. Snap ring on adjusting collar engages with notches on rim of washer to provide for wear take-up. Made by **Edgemont Machine Co.**, 2124 Home Ave., Dayton 1, O.

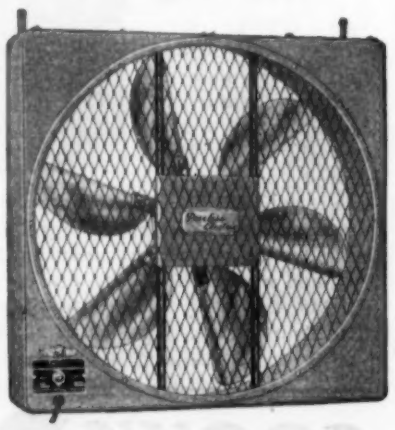
Mention Item NED-4930 when writing

SHEET & STRIP MARKER

Sheet and strip stock can be code marked or otherwise labeled by means of this Master Marker device at rate of up to 2000 feet per minute. It prints on all materials of any thickness, and complete die change can be made in 30 seconds. Mounted and positioned on overhead crossbar by adjustable set-screw collars, unit is actuated by friction drive Alemite lubricated roller bearing wheel equipped with rubber tire. Wheel can be driven either by conveyor or product in production. Either one or two dies can be used at any spacing required. Die pressure is adjustable and remains constant throughout operation. Made by **Pannier Corp.**, 301 Pannier Bldg., Pittsburgh 12, Pa.

Mention Item NED-4931 when writing

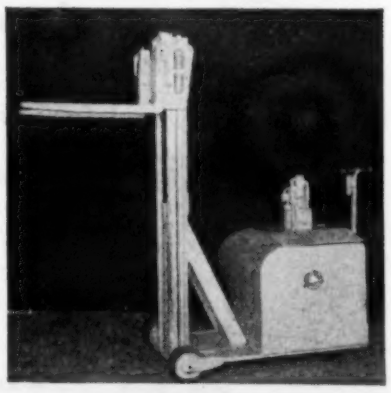
REVERSIBLE ELECTRIC FAN



Designed to exhaust daytime heat or pull in cool night air, this reversible model No. WF-30 all-purpose electric fan can be mounted in window or on pedestal, shelf, counter or floor. Power is provided by 1/6-horsepower 115-volt two-speed electric motor that is thermally protected against burn-out. Front grille protects blades against entry of foreign objects. Unit is 30 inches square and 5½ inches deep. Made by **Peerless Electric Co.**, 1401 W. Market St., Warren, O.

Mention Item NED-4932 when writing

ELECTRIC LIFT TRUCK

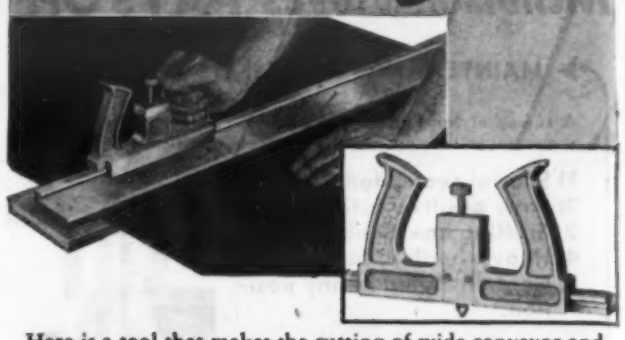


Redesigned 2500-pound capacity Hi-Lift counterbalanced, motorized, hand-operated Walkie truck has short overall length for operation in narrow aisles, minimum turning radius and light weight. Tilting and nontilting models having 66-inch mast as well as unit having 80-inch telescopic mast with 2-degree forward and 20-degree backward tilt are available.

Control handle is of natural grip roller design and controls two speeds forward and two speeds reverse by means of twisting action. Spring return on handle contacts safety switch and applies brake to drive wheel when handle is in vertical position. Power is furnished by two 6-volt, 495-ampere batteries which will operate truck for full 8-hour working day. Made by **Moto-Truc Co.**, 1953 E. 59th St., Cleveland 3, O.

Mention Item NED-4933 when writing

MAKES CUTTING OF WIDE BELTS *Easy*



Here is a tool that makes the cutting of wide conveyor and transmission belting a simple and easy job—it's the Alligator Wide Belt Cutter for cutting all belts (except those containing metal) up to 60" wide and 1⅛" thick.

The guide rail is clamped or nailed to the belt and the cutter head is pushed across the belt. Each cut is made about ⅛" deep and with several rapid strokes the belt is cleanly and squarely cut.

Bulletin No. BC-350 gives all the details on this new cutter.

Order from your Supply House

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Ill.

Also sole manufacturers of Alligator Steel Belt Lacing for transmission and conveyor belts, Alligator V-Belt Fasteners and Flex V Fasteners, for V-Belts, Flexco HD Fasteners and Rip Plates and Hinged Flexco Fasteners for conveyor belts.

Mention Item NED-4934 when writing

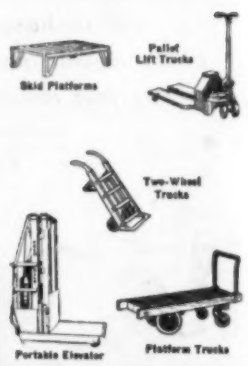
You'll Save Time, Money, Man-Power With This *Easier-Handling, Longer-Wearing* "Weld-Bilt" HYDRAULIC LIFT TRUCK

"Weld-Bilt" PRODUCTS

Truckers use the WELD-BILT Hydraulic Lift Truck with enthusiasm because it's easier to move, simple to operate with minimum effort. Yet it is *tough* and sturdy enough to take years of hard work and abuse.

Important to the WELD-BILT's longer service life is the HORIZONTAL MOUNTING of the Hydraulic Unit — locating this vital unit in a protected position away from any danger of daily knocks and bumps. And this unit is interchangeable; it can be replaced after years of service to add still longer utility to the truck.

Prove the benefits of WELD-BILT equipment in *your* materials handling. There's a size to fit your needs exactly. Write for bulletin 242.



WEST BEND EQUIPMENT CORP.
220 WATER STREET, WEST BEND, WISCONSIN
MATERIALS HANDLING ENGINEERS

Mention Item NED-4935 when writing

GREATER THROAT CAPACITY
LARGER SPINDLE
HIGHER APPLIED PRESSURE

IN 2 *New* KNU-VISE PLIERS

● Square opening utilizes full depth of throat gap. Spindle size increased from 5/16" to ⅜" to give more stiffness and surer grip. Spindles now also available in copper to prevent adhesion of weld spatter. Improved handle design for greater comfort. Model P-1200 provides 1200 pounds clamping pressure, with throat capacity 1 9/32" x 2¼". Model P-1800 provides 1800 pounds clamping pressure, with throat capacity 1 9/32" x 1¼".

All Knu-Vise clamps are characterized by the toggle-action locking grip which can be applied and released instantly with normal hand pressure. There is a Knu-Vise Clamp to meet every clamping requirement.

Send for catalog describing these welding, drilling and riveting aids that bring economy and increased efficiency to your production.

KNU-VISE PRODUCTS LAPEER MFG. CO.
3056 DAVISON ROAD • LAPEER, MICHIGAN

Mention Item NED-4936 when writing

ELECTRONIC AMPLICALL INTERCOMMUNICATION

Makes Every Working Minute Count for GAROD RADIO

SEE YOUR CLASSIFIED PHONE BOOK under "Intercommunication" for your local AMPLICALL specialist, or write us direct.

Garod Radio Corp., large manufacturers of electronic equipment, choose AMPLICALL to solve their internal business communication problems. Mr. Maurice Raphael, assistant to the president, says: "We installed AMPLICALL to relieve our busy switchboard of the heavy load of inter-plant telephone conversations as well as to be able to communicate more promptly throughout the plant. We have had excellent results in both respects." ..... *You*, too, can have the same advantages. Save time in every branch of your business; step up office and plant efficiency; make every working minute count with AMPLICALL—America's finest Business Communication System. Get the full details today!

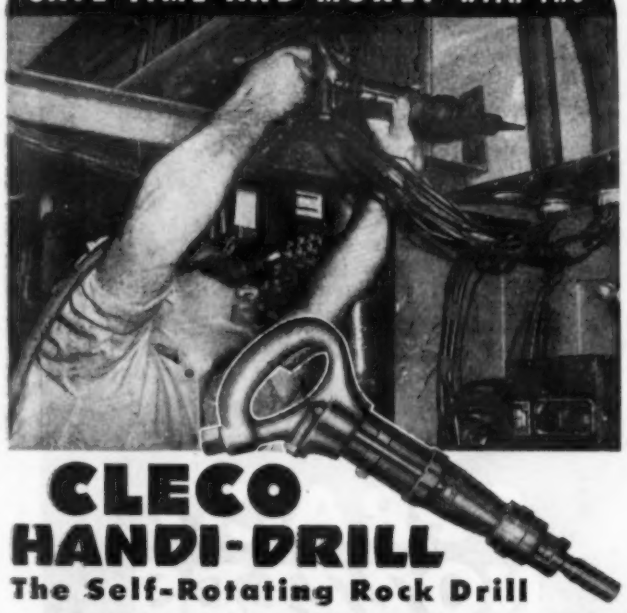
Electroneering is our business

SOUND TELEVISION Rauland INTER-COMMUNICATION

THE RAULAND CORP. • 4255 N. KNOX AVE., CHICAGO 41, ILL.

▲ Mention Item NED-4937 when writing ▲

SAVE TIME AND MONEY with the



CLECO HANDI-DRILL

The Self-Rotating Rock Drill

ONE-HAND OPERATION • LIGHT IN WEIGHT (9 LBS.) • SIMPLE IN CONSTRUCTION • PRACTICALLY NO RECOIL • HITS AND ROTATES AT SAME TIME FOR FASTER PENETRATION • PATENTED SAFETY RETAINER PREVENTS ACCIDENTAL RELEASE OF TOOL FROM DRILL • CONVERTIBLE TO CHIPPING HAMMER BY REMOVAL OF ONLY ONE PART

CLECO DIVISION of the REED ROLLER BIT COMPANY

P. O. Box 2119 Houston, Texas, U. S. A.

▲ Mention Item NED-4938 when writing ▲

SELECT PAINT NEW EASY WAY AND SAVE BIG MONEY

FREE Specification Booklet Shows How!

Shows correct paint for every surface . . . prevents over-ordering or under-estimating . . . lists resistance to acids, caustics, heat, abrasion, moisture, etc. . . . a treasure-book of information!

Save dollars on every paint job. Valuable new Valdura Specification Booklet tells how. Shows what primers and finish coats give best results, last longer—on every surface. No chance of selecting the wrong paint. Solves other problems, too—coverage, correct thinner to use, etc. Ten different booklets now ready for 10 different industries. See list at left. You can get a copy free. You'll say there's nothing more practical than Valdura's new specification booklet. Send *today!*

Booklets Now Ready for these 10 Industries

Bakeries, Breweries, Bottling Plants, Canning Plants, Dairies and Creameries, Institutions, Laundries, Paper Mills, Power Plants, Sewage Disposal Plants

Valdura Division

AMERICAN-MARIETTA COMPANY

43 E. Ohio St., Dept. H, Chicago 11, Ill.

▲ Mention Item NED-4939 when writing ▲

ROD & WIRE MARKER

Production speed marking on steel, iron, brass, lead and plastic rods, tubes or cable can be performed by friction type marking machine No. 14. It consists of ball bearing marking roll that carries engraved steel segment dies which are held in position by face plate with flange that fits into die channels. Marking roll is mounted on angle type base which can be bolted to bench or stand. Interchangeable ball bearing pulleys have different size grooves to suit various diameters of rod, tube or wire which can be fed through machine at any speed. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

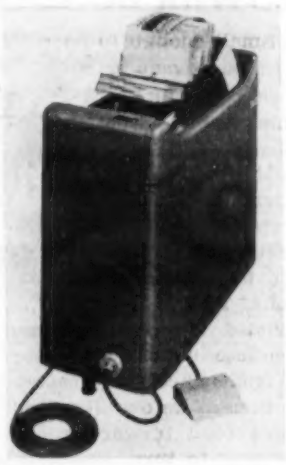
▲ Mention Item NED-4940 when writing ▲

ALUMINUM PRODUCTION

Color, 16-millimeter sound motion picture "Pigs & Progress" depicts production of aluminum from raw bauxite to finished products. Picture gives nontechnical persons an insight into the many processes through which raw materials go before emerging as metallic aluminum. Some of the fabricated products revealed represent new developments indicative of progress made in aluminum industry. Picture is available without charge for showing before interested groups. Requests should be made to Advertising Dept., **Reynolds Metals Co.**, 2000 S. Ninth St., Louisville 1, Ky.

▲ Mention Item NED-4941 when writing ▲

ROTARY CARD FILE

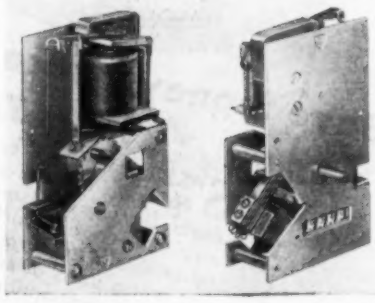


Posting, reference and card removal or replacement are facilitated by automatic control feature of this motorized Master Cardineer rotary card file. Pressing hand button or foot pedal causes records to revolve in either direction to present desired section of file. Desk level in height, one unit will house up to 11,000 records in 3 square feet of space. Seven individual record-holding segments can be removed rapidly for emergency division of work on peak load days.

Single bar record-holding segments accommodate any size card up to 8 x 5 inches or fold-over records opening to 8 x 9¾ inches. Double bar segments will accommodate two rows of smaller cards in wide range of sizes. Three sides of records are exposed, and there is ample space for extending flasher signals on either or both sides or for offsetting records. File clerk can scan all records for signals in 5 seconds. Each rotary card file unit is completely mobile and can be wheeled from one department to another. Desk models are available also. Made by **Diebold, Inc.**, Canton 2, O.

▲ Mention Item NED-4942 when writing ▲

MAGNET ACTUATED COUNTER



Magnetically actuated, this counting device is capable of recording count from any remote point. Designed primarily to register number of musical record selections received in centrally wired music station from remote locations, counter is also suitable for other industrial remote counting applications. It consists of series 15 magnet, standard counter, wire arm actuating assembly, midget contact assembly with single-pole double-throw and single-pole single-throw switch combinations, and lever and cam assembly.

In music station application, unit is mounted on panel, and indicator plate is calibrated so that each step represents deposit of 5 cents. When a patron at any location inserts a coin in music machine box, switch closes and starts pulsing circuit. Number of pulses transmitted depends upon monetary value of coin. Made by **Guardian Electric Mfg. Co.**, 1626 W. Walnut St., Chicago 12, Ill.

▲ Mention Item NED-4943 when writing ▲

More FOR YOUR Money

WITH GORTON Rotary TABLES

AVAILABLE NOW! in 3 Practical Sizes . . . 10", 12" and 15"

CHECK THESE FEATURES . . .

- Table Parallel to .0005"
- Working Mechanism Totally Enclosed
- Hardened, Ground Worm, easily disengaged
- Rugged; simple positive adjustments
- Long-wearing, Semi-Steel Construction
- Table bearings compensated for wear

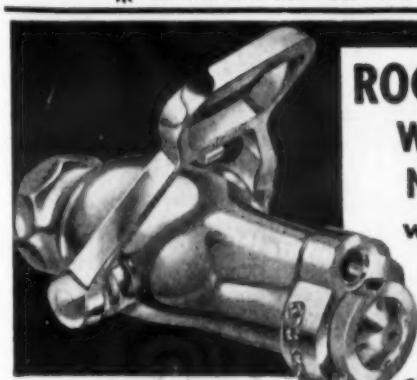
FREE

Get Complete Details on Gorton Rotary Tables and other Gorton Timesaving Production Accessories by writing today for this free Catalog No. 1317.

GEORGE GORTON MACHINE CO.

1907 RACINE AVE., RACINE, WIS. U. S. A.

▲ Mention Item NED-4944 when writing ▲



ROCKWOOD WaterFOG NOZZLES will help you REDUCE FIRE LOSSES

OUT PERFORMS ANY OTHER FOG NOZZLES FOR ALL AROUND FIRE FIGHTING PURPOSES

Light in weight and easy to handle in action, the Rockwood Triple-Action type SG-48 WaterFOG Nozzles will put out or control fires in flammable liquids and ordinary combustibles faster and with less water.

The remarkable fire controlling and extinguishing action of these Rockwood WaterFOG Nozzles will enable your firemen to combat hazardous fires more efficiently and with less physical punishment.

Rockwood WaterFOG Nozzles are designed to operate on either high or low pressures. When you place your next order for fire nozzles, be sure you get Rockwood WaterFOG Nozzles. Available in ¾", 1", 1½" and 2½" hose sizes.

NEW ROCKWOOD TYPE SG-48 TRIPLE-ACTION WATERFOG NOZZLES DISCHARGE

1. High Velocity WaterFOG
2. Straight Stream
3. Low Velocity WaterFOG from Extension Applicator

Rockwood WaterFOG is approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories.

Write for bulletin C-501R.

ROCKWOOD SPRINKLER CO.

44 HARLOW STREET WORCESTER 5, MASS.

▲ Mention Item NED-4945 when writing ▲

You'll see this label

on the finest air cylinders

For more than 40 years the Hanna name plate has been a familiar trademark-of-quality throughout industry. Men who demand the best in cylinder performance, reliability and long life have specified Hanna Air and Hydraulic Cylinders for 1001 uses—in the products they build for sale . . . to save manual labor and increase production in their own plants . . . wherever push, pull, lift, press, clamp or control is needed. Among the multiple applications where Hanna Air Cylinders can be used to great advantage there are probably some or several that may solve YOUR PROBLEMS. Check them over.

Hanna Air Cylinders Catalog No. 234 gives complete details—Write for it.

Hanna Engineering Works

HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . RIVETERS

1765 Elston Avenue, Chicago 22, Illinois

▲ Mention Item NED-4946 when writing ▲

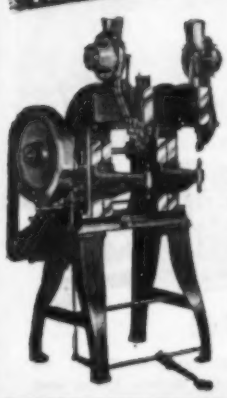
WHATEVER YOU FASTEN . . .

COMPOSITION TO COMPOSITION · FABRIC TO FABRIC · WOOD TO WOOD · METAL TO METAL · LEATHER TO LEATHER

OR ANY COMBINATION OF THESE MATERIALS . . .

Chicago AUTOMATIC RIVETING

FASTENS IT RIGHT . . . AND FASTENS IT FAST

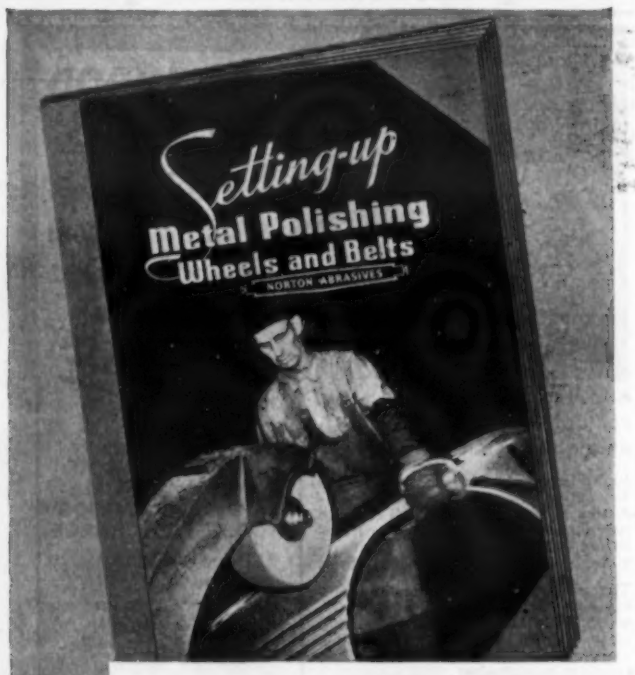


• In Chicago Automatic Rivet Setters from 1 to 4 tubular or split rivets are fed, inserted and clinched in a fraction of a second with each operating pedal release. Adjustment on some models permits handling different sizes of rivets. Riveting machine also adaptable for eyelets, grommets or drive screws.

FREE Fastening Analysis
Your output may be increased and cost reduced if you investigate. Send sample assembly and blue print.

Chicago Rivet
CHICAGO RIVET & MACHINE CO.
9606 W. Jackson Blvd., Bellwood, Ill. (CHICAGO SUBURB)
Tubular and Split Rivets In All Rivet Metals

▲ Mention Item NED-4947 when writing ▲



Helpful Tips on Metal Polishing — Send for Your Free Copy Today!

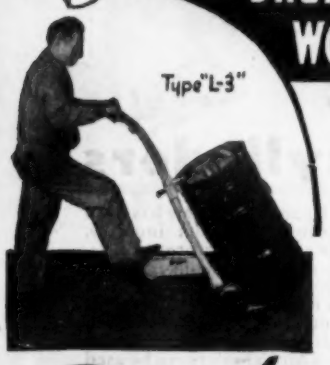
Here's a completely revised, 44-page booklet, profusely illustrated and packed with up-to-date polishing information and actual grain specifications to help you obtain the best results on your specific polishing jobs. Send for free Copy!

NORTON COMPANY • Worcester 6, Mass.

G-195

▲ Mention Item NED-4948 when writing ▲

ELIMINATE HELP--Cut your payroll!
Use the
SABIN One-man TRUCK
for
DRUMS, SHOP BARRELS, WOODEN BARRELS



EASY LOADING. Operator simply runs truck up to container, hooks on at top, pulls back on handle and truck is loaded automatically.

CAPACITY. Up to 800 pounds.

EASY ROLLING. Roller bearings enable pushing or pulling with amazingly little effort.

THIRD WHEEL. A feature which insures better balance, added safety, and enables loaded truck to stand alone.

Write for BULLETIN 48-A

THE SABIN MACHINE CO.
6536 Carnegie Ave. Cleveland 3, Ohio

ALSO TOTE PAN, BOX, CARBOY, KEG TRUCKS!

▲ Mention Item NED-4949 when writing ▲

CERTIFIED AIR RECEIVER

All gases and liquids under pressures up to 200 pounds per square inch can be handled with this air receiver which is furnished with certified code tag and inspected according to ASME code. Tank is available in sizes having capacities from 9 to 170 gallons. Each individual unit is inspected under hydrostatic pressure together with air pressure at twice rated capacity and then hammer tested. Air receivers are available for immediate shipment. This line of receivers is suitable for use in conjunction with air compressors for the purpose of storing air. They also maintain constant pressure in system and equalize pulsations originating from air compressor so as to provide uniform supply of air to tools or equipment. Made by **Dayton Rogers Mfg. Co.**, 2837 Twelfth Ave. S, Minneapolis 7, Minn.

▲ Mention Item NED-4950 when writing ▲

PNEUMATIC SCALING HAMMER

Removal of spatter and excess metal after welding, removal of rust and paint as well as core breaking, peining, chipping, beading and gouging jobs are performed readily with models M-205 and M-206 Master pneumatic scaling hammers. They are adaptable also for stone cutting, bushing and lettering; cutting small rivets and similar light-duty fast percussion work.

Tools are light in weight, consume minimum of air, incorporate feathering type throttling action in both lever and pushbutton controls, and have valve mechanism which locks positively to prevent air leakage and exclude dirt. Illustrated model M-205 has 1-inch bore, 1-1/8-inch stroke, 8¼-inch overall length and weight of 3¼ pounds. Made by **Master Pneumatic Tool Co.**, Peneman Rd., Orwell, O.

▲ Mention Item NED-4951 when writing ▲

POWER LOADING UNIT

Small enough to be used in boxcar or restricted plant areas, this Arrow Scooter-Loader will move 8 cubic feet or 1200 pounds of loose material. It will transport load at speeds up to 15 miles per hour, and is recommended for handling sand and fertilizer, for charging concrete mixers, effecting snow removal, etc. Drive is to front wheels, and caster-type rear wheels enable loader to turn in its own length of 6-1/2 feet. Transmission provides four forward speeds and one reverse speed for backing to turn. Power is supplied by 9-horsepower air-cooled gasoline engine. Made by **Arrow Contractors Equipment Co.**, 2021 Walnut St., Chicago 12, Ill.

▲ Mention Item NED-4952 when writing ▲

Save money, space, weight with SPEEDAIRE

SPEEDAIRE is Cleveland's new fan-cooled, worm-gear speed reducer. Because it is fan-cooled, Speedaire will do more work—will deliver up to *double the horsepower* of standard worm units of equal frame size. For full description, rating tables, etc., send for Catalog 300. The Cleveland Worm & Gear Company, 3283 East 80th Street, Cleveland, Ohio.

CLEVELAND Worm Gear Speed Reducers

▲ Mention Item NED-4953 when writing ▲

SPECIAL Armored-Insulated CONSTRUCTION Gives Greater Strength, Durability and Safety

"DYNAMITE" INSULATED STEAM HOSE

STYLE 801. For pressures up to 150 lbs. Tube is special heat-resisting rubber compound, reinforced with continuous spiral of steel wire, and insulated by woven asbestos lining. Cannot buckle or collapse. Carcass is extra strong combination of rubber and duck. Cover consists of multiple layers of braided wire, surrounded by spiral of half-round galvanized steel. Sizes ½" to 3". Other styles for higher temperatures and pressures. Write for details.

"Mulconroy *Starts* Where Others *Stop!*"

MULCONROY COMPANY
Hose Specialties Since 1887
5331 JEFFERSON ST., PHILA. 31, PA.

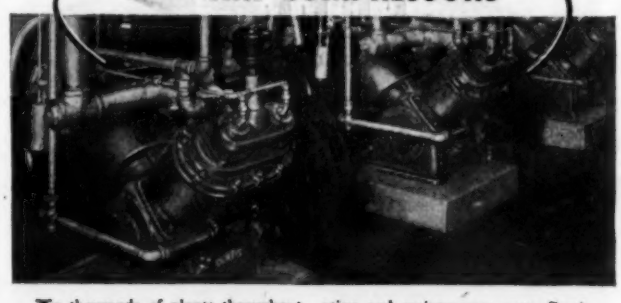
▲ Mention Item NED-4954 when writing ▲

SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

▲ Mention Item NED-4955 when writing ▲

FOR AN ADEQUATE, DEPENDABLE AIR SUPPLY
Specify CURTIS
"PRECISION BUILT"
AIR COMPRESSORS



In thousands of plants throughout the country Curtis Model "C" Air Compressors are delivering a completely satisfactory air supply under widely varying conditions.

The precision construction of every Curtis Air Compressor assures dependable, trouble-free operation with less wear, unusually long life and low operating and maintenance costs. Curtis economy results from such outstanding design features as:

- Timken Roller Bearings
- Positive Lubrication — Self-oiling
- Carbon-free Disc Valves
- Automatic Pressure Unloader
- Precision Construction Throughout

Curtis Air Compressors are available in sizes from ¼ to 50 H.P. Write today for full information.

CURTIS PNEUMATIC MACHINERY DIVISION
of Curtis Manufacturing Company
1979 Kienlen Avenue • St. Louis 20, Missouri

94 Years of Precision Manufacturing

▲ Mention Item NED-4956 when writing ▲

STOP DUSTS

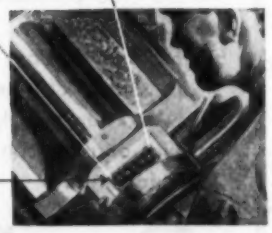
Unit type *ductless* DUST-KOPS for small or big dust sources can usually be installed within twenty minutes. Dustkops cost less to purchase; have cyclone separator and second stage spun glass (non-inflammable) filter.

The Model 420 at right.
Model 1150 below.
Shipment: Prompt!

AGET-DETROIT COMPANY
201 Main at Washington
ANN ARBOR, MICHIGAN

Send For Catalog A-415 Now.

▲ Mention Item NED-4957 when writing ▲



HOW THESE DIRECT VEEDER-READINGS Can Have DIRECT EFFECT on your Product's Sales

Tell your slow-poke prospects that your product now offers them *new usefulness*... through a built-in Veeder-Root Counter.

Tell them your product now keeps count of its own performance... in terms of strokes, revolutions, pieces, volumes, trips, or any other unit.

Tell them they get *direct* readings in bold, black and white figures... nothing to be converted.

Tell them your product can now *prove* its service guarantee.

Tell them this... and *then* see how you sell them!

EXAMPLE: Direct-reading Veeder-Root Counter on milling machine, replacing old style dials with hairline graduations that strain eyes, invite errors. This counter controls depth of cut... is pre-set to indicate in ten-thousandths of an inch.

VEEDER-ROOT INC., HARTFORD 2, CONN.

▲ Mention Item NED-4958 when writing ▲

NON-PLUG NON-STOP BLASTING ACTION with SANSTORM

....the one sandblast machine that won't stop or plug with any dry abrasive used. Sanstorm blasts costs, too, with its steady, fast, efficient action. Simple, rugged construction.

Distributed by
Kelco Sales & Engineering Co.
11150 Hawthorne Ave.
Inglewood, California

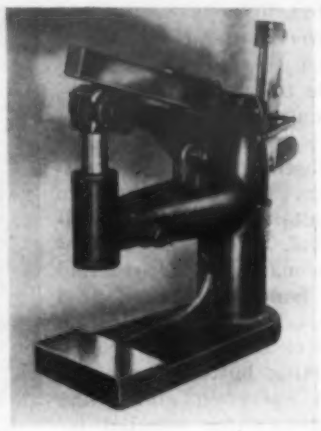
FOR FULL DETAILS WRITE TODAY TO
Niel Evans
Kelco Sales & Engineering Co.
11150 Hawthorne Ave.
Inglewood, California
Name.....
Address.....

Patent No. 2261565
Other Patents Pending

Manufactured by:
Sanstorm Manufacturing Co.
Fresno, California

▲ Mention Item NED-4959 when writing ▲

AUTOMATIC STAKING MACHINE

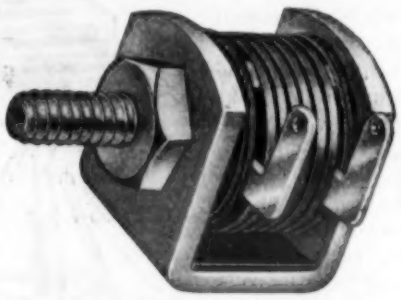


Designed for high speed staking or riveting of fixed or movable joints, this automatic staking machine is equally adaptable for such operations as eyeletting, inserting grommets, burring and pointing. Four sizes are available and have capacities ranging from 1/64 to 3/16-inch. Trip hammer blow is adjustable to meet fabricating needs and same blow is delivered on each workpiece regardless of variations in thickness. Work is held firmly by pressure pad, and hammer cannot be tripped if fingers are in die. Machine is capable of producing in excess of 1000 pieces per hour. Foot treadle operation is optional. Made by **High Speed Hammer Co.**, 305 Norton St., Rochester 5, N. Y.

▲ Mention Item NED-4960 when writing ▲

SMALL SELENIUM RECTIFIER

Designed for use on all low current applications where small size and dependability are factors, this model No. SE 14P 6H miniature selenium rectifier is rated 110-125 volts alternating current, 20 milliamperes direct current continuous duty. Measuring ½ x ½ x ⅝-inch, unit is recommended for installation in television pre-selectors, preamplifiers and relays. It is sealed against entry of moisture and corrosive atmosphere, features spring U-bracket construction and operates over wide range of temperature variations. Made by **Bradley Laboratories, Inc.**, 82 Meadow St., New Haven 10, Conn.



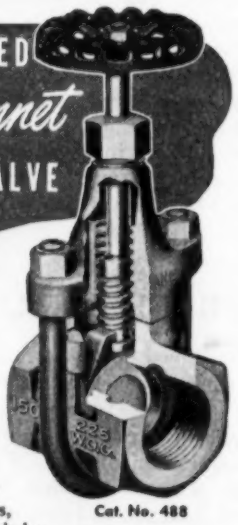
▲ Mention Item NED-4961 when writing ▲

PORTABLE FLOOR CRANE

Available in 1-ton standard, 2-ton low mast and 2-ton high mast models, Hydro-Crane portable hydraulic floor crane has durable welded construction, positive nonfreezing mast control valve and 2-ton multiple speed pump. Equipped with heavy duty casters with ball bearing races and needle roller bearing axles, it can be maneuvered easily in confined space. Pump and pulling handles are out of way when not in use, and pump handle remains automatically in any desired position. Optional equipment includes extension beam and other attachments. Made by **Stratton Equipment Co.**, Hanna Bldg., Cleveland 15, O.

▲ Mention Item NED-4962 when writing ▲

SEE THIS IMPROVED *Free-Draining Bonnet* IRON CLAMP GATE VALVE



Cat. No. 488

1. *Bonnet drains fully. No flats or pockets to trap fluids. No freezing in bonnet.*
2. *Wiping action of interrupted bonnet threads keeps stem screw clean. Protects threads; prevents sticking in heavy fluid service.*
3. *More compact bonnet and stem design reduces clearance requirements.*

WHERE TO USE: This improved free-draining bonnet means a better clamp gate valve for handling caustics, alkalies, corrosive chemicals—for fuel, lubricating, and other heavy oils—for tarry and similar fluids. Also for lines subject to freezing. Crane clamp gate valves are easy to service and stay tight. They're Crane quality throughout—yet moderately priced.

AVAILABLE IMMEDIATELY in all iron, with screwed ends, in sizes from ¼ to 4 in. Working pressures: Up to 150 pounds steam; 225 pounds water, oil, or gas, depending on size.

ASK FOR DESCRIPTIVE BULLETIN AD-1667

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

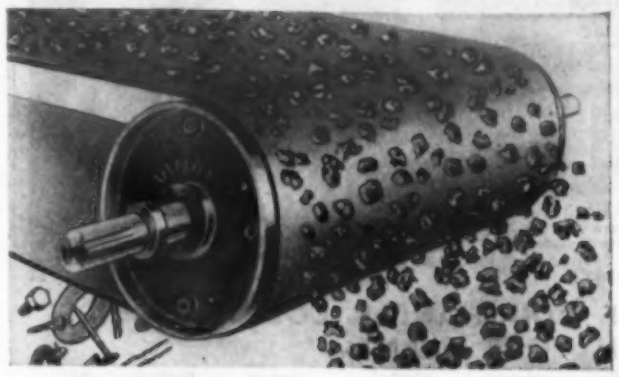
CRANE

Everything for Every Piping System

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

▲ Mention Item NED-4963 when writing ▲

NEW! Alnico Magnet PERMA-PULLEY



. . . built by Dings

For automatic removal of iron from material carried on belt conveyors.

No matter what your iron-removal requirements, Dings offers *the most powerful magnetic pulleys for the job.*

1. For burden depths up to 2"—The Dings PERMA-PULLEY.
2. For burden depths over 2"—The Dings High Intensity Electromagnetic Pulley.

Dings PERMA-PULLEYS are available in a complete range of 53 sizes. Send for NEW BULLETIN giving complete details.

- Most powerful non-electric pulley on the market!
- No wiring—no electrical accessories.
- Magnetic permanence GUARANTEED FOREVER!
- Simple to install.
- No operating cost.
- No maintenance.
- Extra high strength Alnico magnets used.
- Equal magnetic strength across entire belt width.

DINGS MAGNETIC SEPARATOR CO.,
4758 W. McGeogh, Milwaukee 14, Wis.

Dings MAGNETIC SEPARATOR HIGH INTENSITY

▲ Mention Item NED-4964 when writing ▲

There is no better policy

FOR INSURING ENGINEERING RECORDS

POST

PENCILtex POLICY

Protection Against Torn Ragged Tracings

In many organizations, the use of PENCILtex is more than the best in drawing mediums PENCILtex is insurance against torn, ragged tracings.

Drawings on PENCILtex remain in good condition after many years of reference, filing and printing. PENCILtex has greater wearing quality than ordinary tracing cloth—is more transparent and has a moisture resistant surface.

PENCILtex takes pencil perfectly, makes splendid blue prints and provides a permanent durable tracing. There is no better policy for insuring engineering records.

Pencil-Tex PENCIL TRACING CLOTH

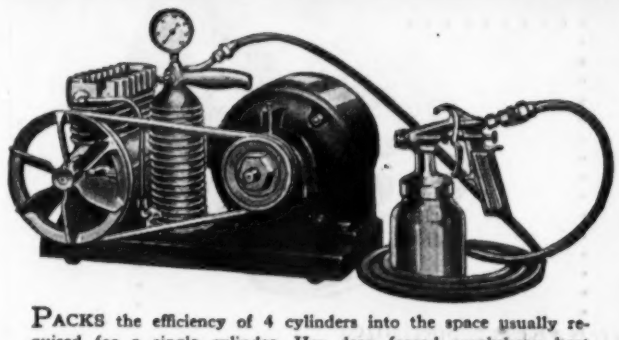
The Frederick Post Company

3650 N. Avondale Avenue • Chicago 13, Illinois
Detroit — Houston — CHICAGO — Los Angeles — Milwaukee
Distributors in all Principal Cities

▲ Mention Item NED-4965 when writing ▲

PRESSURE QUEEN

FOUR CYLINDER
PORTABLE AIR COMPRESSOR
SPRAY PAINTING OUTFIT



PACKS the efficiency of 4 cylinders into the space usually required for a single cylinder. Has drop forged crankshaft; heat treated stainless steel valves; bronze bearings and forced feed lubrication. Delivers maximum 50-60 lbs. pressure free from pulsation.

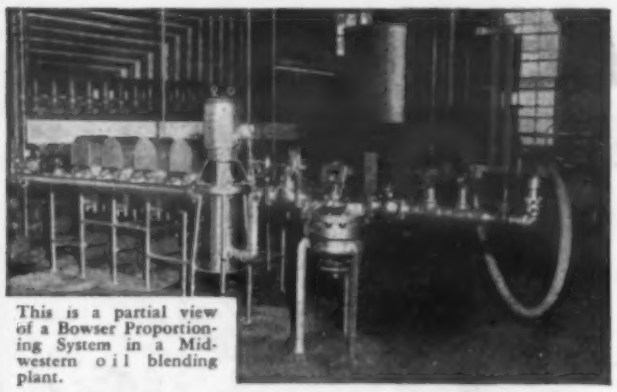
The ideal air supply for machine shop, factory, garage, service station. Inflates tires; refinishes and lubricates automobiles, trucks, tractors and equipment, anywhere any time. Better, faster and cheaper than brush work for painting buildings. Indispensable for home and farm workshop.

Equipment includes the compressor, mounted as shown above, with belt, compressor pulley, air chamber, air gauge, 15 ft. hose, spray gun and grease gun, powered by ⅓ or ½ h.p. motor or gas engine. Immediate delivery.

IF YOUR DEALER DOES NOT SELL PRESSURE QUEEN, WRITE DIRECT.

THE CAMPBELL-HAUSFELD COMPANY
193 RAILROAD AVE. HARRISON, OHIO

▲ Mention Item NED-4966 when writing ▲



This is a partial view of a Bowser Proportioning System in a Midwestern oil blending plant.

IF YOU HANDLE COSTLY LIQUIDS IN YOUR PLANT—

oils, solvents, alcohols, thinners, sizings, etc.

BOWSER PRODUCTS ARE DESIGNED TO GIVE YOU—

1. Accurate inventory records.
2. Automatic blending of two or more liquids.
3. Automatic, predetermined measurement for filling cans, drums and other containers.

Bowser Liquid Control Systems have lowered costs in hundreds of plants. They may be the answer to your problems, too. We'll gladly show you why! No obligation . . . just write.

SALES AND SERVICE IN ALL PRINCIPAL CITIES

BOWSER **Bowser, Inc., 1381 Creighton Ave. Fort Wayne 2, Indiana**

LIQUID CONTROL SPECIALISTS SINCE 1885

Mention Item NED-4971 when writing

What's Interesting About UNION CHAIN'S Raw Materials?

Sprocket chain is essentially an assembly of Sidebars, Bushings, Rollers and Pins, fabricated from Strips, Bars, and Rounds of steel.

Since UNION manufactures all types of steel sprocket chain for the transmission of power and the mechanical handling of materials and nothing else, the specifications of every lot of Steel which UNION buys, are determined only by the desire to build the greatest ultimate service into the particular chain part for which it is required. This circumstance should be interesting to UNION'S present and future customers.

THE UNION CHAIN AND MANUFACTURING COMPANY
Sandusky, Ohio, U. S. A.

Mention Item NED-4972 when writing

it's KESTER
for every soldering operation

There is a Kester "Specialized" Flux-Core Solder in strand size, type of flux, and alloy to fit your needs. Consult our Technical Service Department on any soldering problem.

KESTER SOLDER

KESTER SOLDER COMPANY
4249 Wrightwood Avenue,
Chicago 39, Illinois
Factories Also at
Newark, New Jersey · Brantford, Canada

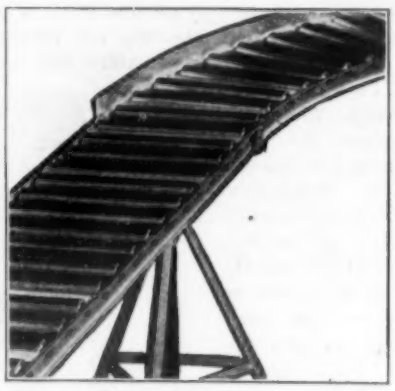
Mention Item NED-4973 when writing

AUTOMATIC RESET TIMER

Synchronous motor driven model R automatic reset timing unit is available to operate in seconds, minutes and hours or fractions thereof. Worm gear adjustment permits settings to be accurate to small fraction of time interval. Motor is instantaneous and self-starting on impulse. After desired operating time is preset on the clear-line dial, manual starting button is pressed, and operation starts and continues for selected interval. Upon completion of time cycle, timer stops and automatically resets itself. Units are available in closed case, window case or for panel mounting. Made by **Lumenite Electronic Co.,** 403 S. Dearborn St., Chicago 5, Ill.

Mention Item NED-4974 when writing

ROLLER CONVEYOR

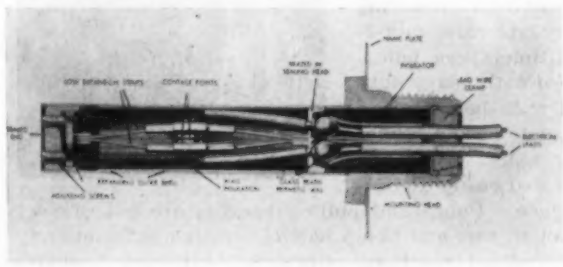


Tripod-supported, dual-purpose, reversible roller conveyor is fabricated with roller axles off-center in frame so that rollers extend above frame edges for handling loads wider than conveyor. When conveyor is turned over, frame edges extend above rollers to form continuous guard rail that prevents small packages or loads from falling off. Conveyor sections are available in standard lengths of 5 and 10 feet and with 5, 8 and 10-foot curves having 45 or 90-degree angles. Made by **Metzgar Co.,** 406 Douglas N.W., Grand Rapids 4, Mich.

Mention Item NED-4975 when writing

FIRE DETECTING DEVICE

Suitable for use in hazardous as well as ordinary locations, Detect-A-Fire fire detecting device is approved by Underwriters' Laboratories for temperatures ranging up

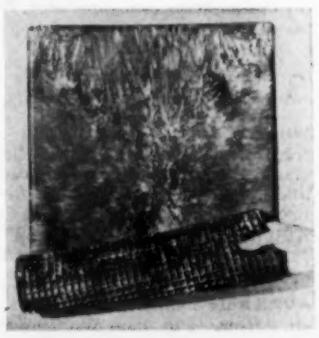


to 725 F. It operates at almost the exact calibrated temperature regardless of rate of temperature rise. Since temperature-sensitive element is the stainless steel casing, its response is inherently rapid. Expansion of casing resulting from temperature rise is transmitted to inner strut assembly which magnifies motion and operates contacts.

Units can be spaced at 25-foot intervals and up to 12½ feet from adjacent walls. They are hermetically sealed and are repeatable in spite of exposure to flame for short periods. Electrical rating is 125 volts, 5 amperes, alternating current; and 125 volts, ½-ampere, direct current. Made by **Fenwal, Inc.,** 70 Pleasant St., Ashland, Mass.

Mention Item NED-4976 when writing

RUBBER FLOOR MAT



Improved type, nonmarking, nonskid Standeze Softaire rubber mats provide maximum relief from standing fatigue. Cellular structure of mat has been enlarged and now contains more than 2000 small resilient cells. These added cells give greater resiliency and ability to handle greater weights. Available in size 16 x 23½ inches with color combinations of blue and white, gray and white, red and white, green and white and burgundy and white as well as solid slate gray, mats are suitable for use in factories, plant offices, and professional offices. Flat standing surface has no ridges or bumps to collect dirt, and mats can be washed with soap and water. Made by **Colonial Rubber Co.,** Ravenna, O.

Mention Item NED-4977 when writing

IMPROVED MODEL McCORD UNIT HEATER

The improved McCord Unit Heater incorporates every unit heater advancement that McCord engineers and the experience of thousands of users could suggest. The distinctive modern design with rounded corners combines improved appearance with greater strength and houses a heating unit that sets a new standard of heat transfer efficiency and quietness. The scientific design of the individual turbo spiral fin tube core provides even distribution of heated air at high velocity. The individual tubes prevent stresses due to unequal expansion. The entire heating unit is spring suspended and floats free in the casing eliminating rigid connections. Deep pitched fans provide high air delivery and quietness of operation.

This improved heater is a development of the experience gained from the thousands of McCord Unit Heaters in service. It combines good appearance with that inherent McCord quality of ruggedness and dependability that has made McCord the standard among many of the largest industrial users. You may also replace old leaking heaters using new McCord units and your old fan and motor. Write for new catalogs—Unit heaters and blast coil units. **McCord Corporation,** 2580 E. Grand Blvd., Detroit, Mich. —Advt.

Mention Item NED-4978 when writing

K-P *Spiral Woven Wire*
CONVEYOR BELTS

Made in suitable metals and mesh sizes for conveying, material handling, processing and heat treating. Particularly well adapted to the food industries where free circulation of air and drainage are required. K-P Flextrough Belts with flanges edges prevent small parts from rolling off the belt. Side chains provided for sprocket drive. Complete special purpose conveyors designed and manufactured.

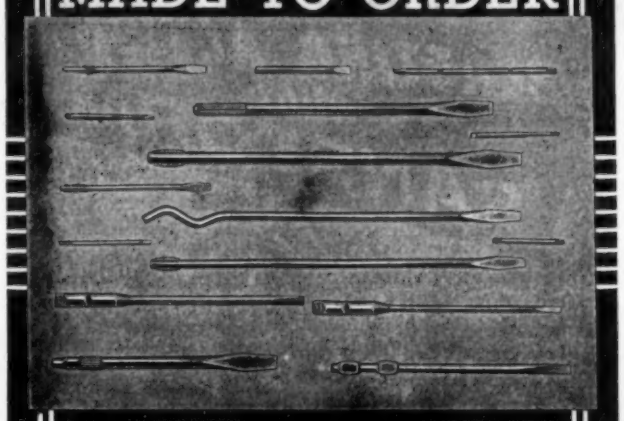
KP "Keeps Promises"

KORB-PETTIT
Wire Fabrics & Iron Works Inc.
Engineers and Manufacturers
1501 North Mascher St.
Philadelphia 22, Pa.

Wire Mesh, Spiral Woven Wire Conveyor Belts, Infra-Red Conveyor Dryers, Leather Finishing and Drying Machines, Industrial Wire Partitions, Machine and Window Guards, Cages, Enclosures, Grilles, etc.

Mention Item NED-4979 when writing

MADE TO ORDER



Screw driver blades to order for assembly in any type of handle, wooden, composition or plastic.

Points in either keystone or cabinet type. Edge of point carefully made and of uniform thickness.

Shanks are winged, fluted, formed or milled, as shown.

Blades furnished in plain finish, blued or nickle plated.

The Torrington Company
SPECIALTY DEP'T.
Torrington, Conn., U.S.A.

Mention Item NED-4980 when writing

TORIT DUST COLLECTORS

are going "hell-for-leather" in this shoe factory

Dust is one of the by-products of shoe manufacture. In the shaping of soles and heels, and the buffing of finished parts, fine particles of leather, mixed with polishing and dyeing compounds are loosed in large quantities.

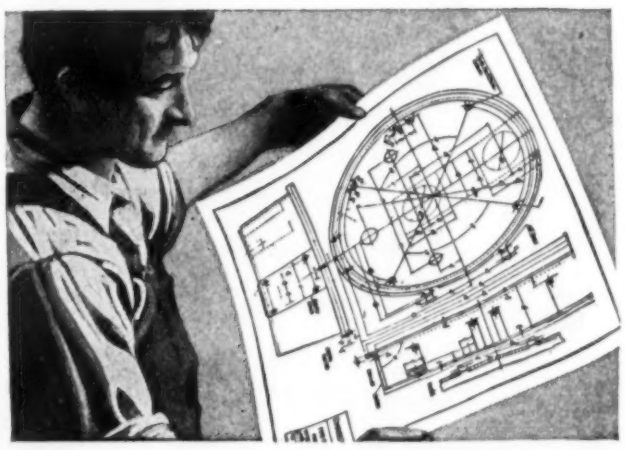
Many shoe manufacturers now use TORIT equipment to collect this waste and recirculate the cleaned air. They have found compact, self-contained TORIT Dust Collectors easy to install and thoroughly efficient in operation.

This is one of many installations showing the adaptability of TORIT Dust Collectors to the dust collection problems of different industries. They are available for immediate delivery in models ranging from ⅓ HP to 5HP. For details and the latest TORIT catalog, write:

TORIT MANUFACTURING CO.
298 Walnut Street St. Paul 2, Minn.

▲ Mention Item NED-4981 when writing ▲

DRIPRINT
TRADE MARK



The *Better* Dry-Developed Paper for *Better* Prints

Improvement has followed improvement in the chemistry of print-making papers and processes. Only frequent comparison of the many methods and materials available can bring you the real benefits of this progress. If you are a user of direct positive prints produced by ammonia vapor development, or are interested in adopting this process, be sure to try Dietzgen's DriPrint, the *better* dry-developed paper, and see the difference. May be used with any make of high-speed printing and developing equipment. Superior contrast, firm full-bodied lines with clear white backgrounds . . . reliable uniformity . . . time-saving speed . . . these desirable features have made Dietzgen's DriPrint the specified choice of thousands of discriminating print users. A better paper at no extra cost. Available in cut sheets or rolls. Ask your Dietzgen dealer or nearest Dietzgen office for a demonstration.

EUGENE DIETZGEN CO.
Chicago • New York • San Francisco • New Orleans
Pittsburgh • Los Angeles • Philadelphia
Washington • Milwaukee
Dealers in All Principal Cities

DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

▲ Mention Item NED-4982 when writing ▲

WIRE INSULATION STRIPPER

Simple twist of the wrist and quick pull is all that is required to strip insulation from No. 12 to 22 wire with this Quick Strip tool. Ideal for use in close quarters, device will remove braided shielding as well as rubber covering from cable or wire. Round, hardened and ground blade has three different size stripping slots and fourth groove which is used to clean wire if needed. Blade can be resharpened by honing or replaced easily. Made by **Jaco Products,** Room 210-A, 6408 Euclid Ave., Cleveland 3, O.

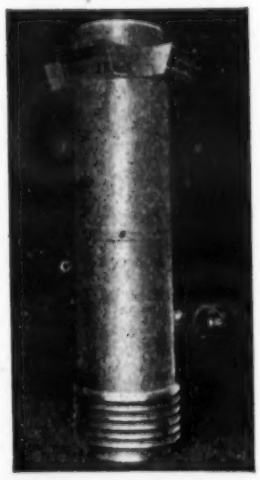
▲ Mention Item NED-4983 when writing ▲

FLUID CIRCULATING PUMP

All parts of this Bro-Jo fluid circulating pump are constructed of corrosion-resistant materials so that it can be used for wide range of applications such as evaporative coolers, coolant systems, wet tanks, fountains and laboratory service. Powered by 1/30-horsepower motor, it features fully enclosed impeller and pump housing of plastic which will neither corrode nor clog. Fluid lubricated bearings in pump, oil recirculating motor bearings, flexible shaft coupling, and Monel mounting plates and supports are features. Capacity ranges from 11 to 3.9 gallons per minute with heads of 0 to 10 feet. Made by **Broadbent-Johnston, Inc.,** Dept. 10, El Monte, Calif.

▲ Mention Item NED-4984 when writing ▲

DIRECT-FIRED UNIT HEATER



Delivering up to 550,000 British thermal units per hour, this Thermobloc direct-fired unit heater is usable singly or in multiples located throughout plants to provide uniform draftless space heating. Burner efficiency with either No. 3 fuel oil or gas is 80 to 85 per cent. Only 30-inch diameter floor space is required, and operation is completely automatic. Heater is shipped ready for operation upon connection to fuel source, electricity and exhaust stack. Fan can be employed in summer for ventilation purposes. Made by **Prat-Daniel Corp.,** Thermobloc Div., 66 Water St., East Port Chester, Conn.

▲ Mention Item NED-4985 when writing ▲

SCHRAMM AIR COMPRESSORS

With Cooling Unit

The built-in type drive utilizes to the fullest extent the efficiency of motor and compressor. It is also more compact and readily installed. Compressor and motor are assembled rigidly and in perfect alignment.

SCHRAMM INC. WEST CHESTER, PA.

▲ Mention Item NED-4986 when writing ▲

Flat Foundry File

FOUNDRY FILES

Half Round Foundry File

NEEDED FOR FILING FOUNDRY CASTINGS

"Regular" files are not designed to stand the abuse of foundry filing. Their comparatively high, sharp teeth are meant only for fast stock removal in general filing. Snagging castings — removing fins, knobs, sprues, sharp edges and other rough projections hardened by sudden chilling—subjects them to "shelling off" or wearing down rapidly.

Though not casually visible, there is an important difference . . . Nicholson and Black Diamond Foundry Files have extra-strong, rugged teeth — with heavier set edges in the Half Round and regular edges in the Flat shapes.

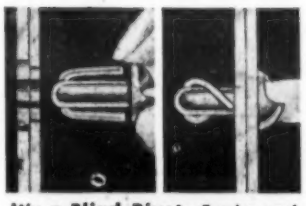
These Foundry files are widely used, not only for snagging castings, but also for filing narrow edges and sharp corners of dies, and for many other kinds of rough filing. Regularly made in Flat and Half Round shapes and Bastard cut. Buy from your industrial distributor. **Free Book, "File Filosophy."**

NICHOLSON FILE COMPANY
14 Acorn St., Providence 1, R. I.
(In Canada, Port Hope, Ont.)

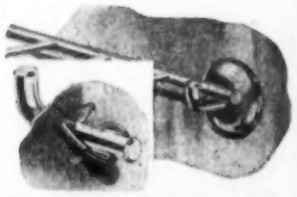
NICHOLSON FILES
for every purpose

▲ Mention Item NED-4987 when writing ▲

Have you a similar use for this 1-piece fastener?



It's a Blind Rivet—Locks and unlocks with a 90° clockwise rotation; no more nuts or bolts.



It's a Refrigerator Shelf Support—Any head can be made without affecting principle.

It's a Cabinet Door Strike—Simple to install, slashes assembly cost, eliminates welding.

What's Your Application?—Tell us how you can use Spring-Lock; we'll work out details.

Millions of these ingenious Spring-Lock Fasteners are used in electrical, automotive, railroad, aviation and household appliance industries. Design engineers marvel at their utility and flexibility. Write today for literature and free samples.

SIMMONS FASTENERS
SPRING-LOCK • QUICK-LOCK • LOCK-NUT
Simmons Fastener Corp., 1757 N. Broadway, Albany 1, N. Y.

▲ Mention Item NED-4988 when writing ▲

DOUBLE-ACTION AIR CYLINDERS

FACE MOUNTED CYLINDER

HORIZONTAL MOUNTING

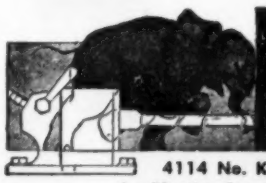
VERTICAL MOUNTING

SUSPENDED OR SWIVEL MOUNTING

Mounting	Bore				
Horizontal	1½"	2¼"	3"	4"	5"
Vertical		2¼"	3"	4"	5"
Face		2¼"	3"	4"	5"
Swivel		2¼"	3"	4"	5"

Length of stroke optional

The new Mead Air Power Catalog shows the full line of single and double-acting cylinders, and air-operated Presses, Vises, Chucks, Hammers, Work Feeders—for faster, money-saving production. Write!



MEAD
SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. NA-78, Chicago 41, Ill.

▲ Mention Item NED-4989 when writing ▲

Fast but accurate

Littell ROLL FEEDS

Style "M"

1. Adjustable timing
2. Hardened feed rolls
3. Extra rugged guide
4. Automatic roll lifter for die to pilot work
5. Time-saving lifter
6. Easy-to-attach bracket

Simplify work for your die setters and press operators. Get easy-to-install Style "M" Roll Feeds. All the features of higher priced feeds except the price. Positive, silent roller drive gives high speed with exceptional accuracy. One of many fine Littell pressroom machines. REQUEST BULLETIN.

F. J. LITTELL MACHINE CO.
4161 RAVENSWOOD AVE., CHICAGO 13, ILL.

Mention Item NED-4990 when writing

ON THE LEVEL

you'll save time and money with

Empco JACKS

3 SIZES
No. 1—2" normal height
No. 2—2½" normal height
No. 3—3½" normal height

POSITIVE, ACCURATE MEANS FOR SETTING AND KEEPING MACHINES LEVEL IN A MERE MATTER OF MINUTES!

Machine Tool Manufacturers strongly emphasize the need, not only to set machines level, but to keep 'em that way. Periodic re-leveling is essential for accurate work tolerances. How often, depends on the type of foundation. No method of machine setting is stable enough to maintain the accuracy of initial leveling. It is important to check after first month of operation, then check periodically and re-level whenever necessary.

When a machine is set on EMPCO JACKS, the whole operation is the work of but a moment: Simply apply a wrench to the "hex" screw head, turn right or left until your level indicator reads "zero."

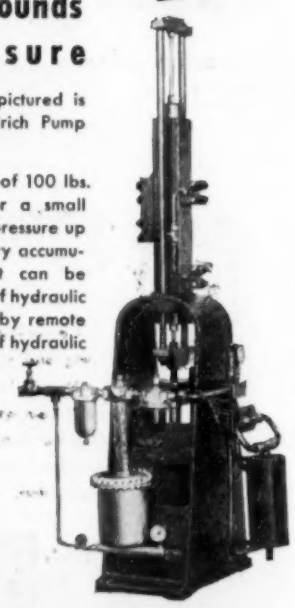
EMPCO

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVE. DETROIT 12, MICH.

Mention Item NED-4991 when writing

New AIR POWERED PUMP

Delivers 20,000 Pounds Hydraulic Pressure



The air powered hydraulic pump pictured is a recent development of the Aldrich Pump Company in Allentown, Pa.

It was designed to use a maximum of 100 lbs. of air from your plant system or a small compressor to deliver any desired pressure up to 20,000 lbs. without using auxiliary accumulators or complicated controls. It can be profitably applied in the operation of hydraulic presses, in proportioning chemicals by remote or manual control, in the operation of hydraulic jacks in hydrostatic testing and, probably, in many other ways.

Can you employ it to advantage in your plant operations?

We would be glad to cooperate with you in determining whether or not this pump can save you money. You can get complete information by writing to:

ALDRICH THE ALDRICH PUMP CO.
4 GORDON STREET • ALLENTOWN, PA.

Mention Item NED-4992 when writing

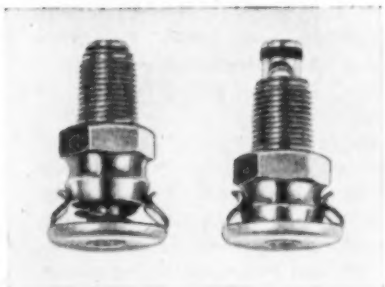
MOLECULAR STILL

Centrifugal type model CMS-5 molecular still for fats, oil and waxes has been designed for laboratory bench mounting. It is 32 inches high and occupies approximately 3 square feet of bench space. Meters and controls are mounted on single panel and include thermocouple, dial, Pirani type vacuum gage and Variac transformer to control temperature of evaporator.

Samples measuring 2 liters or less can be handled conveniently. Substance to be processed is contained in bottom of inverted jar and is fed by means of small circulatory pump onto center of rotor for spreading and evaporation. Normal operation pressure is 0.1 to 10 microns. Made by **Distillation Products, Inc.**, 755 Ridge Rd. W., Rochester 13, N. Y.

Mention Item NED-4993 when writing

PUSH-PULL DRAIN VALVES

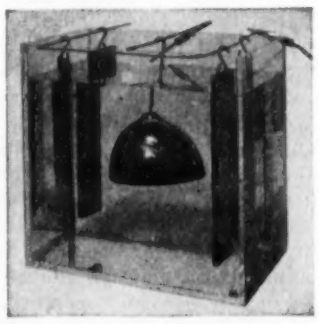


Push-pull, snap-action Bar-Jon drain valve is particularly suited for use with radiators, blocks, strainers, water-pumps, compressed air tanks and numerous other assemblies where frequent draining is necessary. Valve opens when pushed and closes when pulled. In relatively inaccessible places, tip of screwdriver will actuate valve control. Resilient synthetic seal which is resistant to most liquids provides positive seal when unit is closed, and valve is self-cleaning.

Valve is corrosion resistant and is available in ⅛, ¼, ⅜, and ½-inch National Pipe Thread sizes. It can be furnished with straight threads and gasket upon request. Made by **Bar-Jon Mfg. Co.**, 2017 Leo St., Dayton 4, O.

Mention Item NED-4994 when writing

PLASTIC PLATING TANK



Plating tanks can be fabricated of H-T Lucite by means of Singleton-Weld process. These tanks offer resistance to all acids and alkalies and feature tensile strength up to 10,000 pounds per square inch. They are noncontaminating, nondeteriorating, transparent, elastic, shatterproof, lightweight and economical. Transparency permits watching baths in action. Made by **Singleton Co.**, 9823 Lorain Ave., Cleveland, O.

Mention Item NED-4995 when writing

Vaportight

Industrial Lighting Fixtures

Dependable lighting in the presence of moisture and non-flammable dusts, gases or vapors is assured by the substantial protection built into Pyle-National Vaportight Pylets. Heavy cast metal bases, weathertight sealing, and heavy guards, are features that provide for the most severe operating conditions of industrial service.

The Pylet line includes a complete range of types, including types for conduit and wall mounting, universal 4 and 5-hub types, two and three gang, handrail and outlet box fixtures for 10 watt to 200 watt lamps. Also Midget fixtures, plugs and receptacles, switches, junction boxes and other vaportight Pylets. Consult your Pylet Catalog 1100 for complete listings.

THE PYLE-NATIONAL COMPANY
1342 NORTH KOSTNER AVENUE, CHICAGO 51, ILLINOIS
SINCE 1897

Mention Item NED-4996 when writing

SLY PIONEERS AND LEADERS IN Dust Control

Sly Dust Collector used for the collection of fine, float, silica dust in a large southern California plant. Thousands of other Sly Dust Collectors are used similarly for suppression and collection of injurious dusts.

THE most effective—as well as simplest and cheapest—method of dust collection is by cloth filtration. The Sly Collector uses more cloth than any other and hence has greater filtering capacity.

This additional capacity plus savings in operation and maintenance make Sly most inexpensive in the long run. Ask for Bulletin 98 and state your condition so that we can write you fully.

THE W. W. SLY MFG. CO.
4748 Train Avenue • Cleveland 2, Ohio

Representatives in New York • Chicago • Philadelphia • Detroit • Cincinnati
Rochester • St. Louis • Toronto • Los Angeles • Birmingham • Minneapolis

Mention Item NED-4997 when writing

Barber-Greene

Sensational

NEW CAR UNLOADING TEAM!

unloads car of coal, rock or crushed stone in 45 minutes!

358 B-G HOPPER CAR UNLOADER

Here's a rugged all-material unloader that's completely new in design. The 358 cuts hopper car unloading time as much as 90%—unloads most any bulk product from fine sandy material to large-sized aggregates and coal at capacities up to 3 tons per minute—empties a 60-ton car in as little as 45 minutes without jam-ups or delays. There's *positive material flow at all times.* Easily "spotted" in track pit or above rails—really portable—can be towed at normal traffic speeds.

363 B-G PORTABLE CONVEYOR

The newly designed B-G Model 363 Portable Conveyor is an extremely flexible machine that will prove to be profitable to yards, industrial plants, contractors, etc. Speeds up stock-piling or transfer of material from car or stock pile to trucks. Entirely new in design, the 363 features V belt drives, pneumatic tires, shock absorbers, towing hitch, and a host of new improvements. Send for new attractive literature on these two great B-G machines.

BG BARBER-GREENE COMPANY
AURORA, ILLINOIS

Constant Flow Equipment

Mention Item NED-4998 when writing

YALE THE YALE & TOWNE MANUFACTURING CO.
4530 Tacony Street, Philadelphia 24, Pa.
HAND LIFT AND ELECTRIC TRUCKS • HAND AND ELECTRIC HOISTS • SCALES

▲ Mention Item NED-4999 when writing ▲

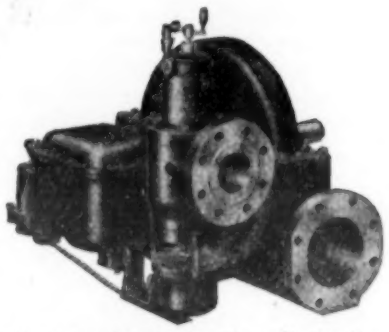
COLOR MEASURING UNIT

Color differences are determined more accurately with this model PPG-IDL photoelectric Color Eye than is possible with the human eye. Differences are read directly on meter and are divided by total reflected light to give comparisons in terms of percentage reflectance difference. Regardless of illumination level or color density, colors matched with device are industrially satisfactory regardless of detailed spectrophotometric color curve of samples. Instrument is particularly useful in textile, paint and other industries where color matching has been dependent on the human eye. Developed in co-operation with Pittsburgh Plate Glass Co., device is available from **Instrument Development Laboratories, Inc.**, Williston Park, Long Island, N. Y.

▲ Mention Item NED-5002 when writing ▲

MECHANICAL-DRIVE TURBINE

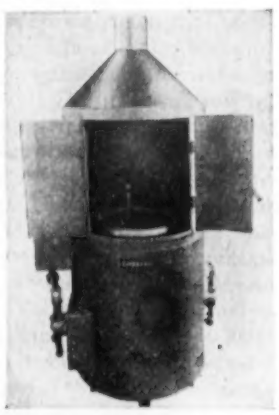
Small, mechanically-driven type DP turbines are available in ratings from 10 to 1200 horsepower in three single-stage frame sizes with 16, 20 and 25-inch wheels. Turbines operate at speeds ranging from 1000 to 5000 revolutions per minute and feature hydraulic governing and pressure oil bearings. They can be applied as drive for pumps, compressors, fans, blowers and similar equipment. Maximum number of parts is enclosed in oil atmosphere, thereby eliminating problem of rust when units are used for standby service. Made by **General Electric Co.**, Schenectady 5, N. Y.



▲ Mention Item NED-5003 when writing ▲

GAS-FIRED POT FURNACE

Gas-fired Hi-Life pot furnaces are available in four standard sizes for utilization of cyanide pots of 24 x 21 inches, 20 x 21 inches, 16 x 18 inches and 12 x 18 inches in size. Units have been tested through two years of actual production line operation. One year guarantee is given with all pots used with cyanide or lead (neutral salts excluded) which are under automatic temperature control. Made by **Lindberg Engineering Co.**, 2444 W. Hubbard St., Chicago 12, Ill.



▲ Mention Item NED-5004 when writing ▲

MORE REFRIGERATION
WITH YOUR PRESENT COMPRESSOR

NIAGARA AERO-PASS CONDENSER

Saves 15% to 35% of Power

● Reducing head pressure from 195 lbs. to 165 lbs. adds extra capacity to your refrigeration system.

Users of the NIAGARA AERO-PASS Condenser gain this advantage, saving 15% to 35% of power, and 95% of water consumption.

NIAGARA patented "Balanced Wet-Bulb Control" provides constant year 'round operation at the minimum head pressure, without attention. Users say it saves half the trouble of operating a refrigeration system.

These savings are permanent, because the NIAGARA patented "DUO-PASS" pre-cooling coil prevents clogging of condenser tubes with scale.

Patented NIAGARA "Oilout" removes oil and sludge from the refrigerant at the most effective point, keeping the system clean and at peak operating efficiency.

Write for Bulletin 103ED

NIAGARA BLOWER COMPANY
Over 30 Years' Service in Air Engineering
405 Lexington Ave., New York 17, N. Y.
Field Engineering Offices in Principal Cities

▲ Mention Item NED-5006 when writing ▲

WATERBURY TOOL

CUTS CONTAINER COSTS

WATERBURY
...a famous name among tool manufacturers... packs its Tilting Arbor Saw in a General Wirebound Crate. Wirebound mats stack flat, save space. They are quickly and easily assembled. Write for information on how you, too, can cut packing costs and speed production.

ALL TYPES OF ENGINEERED SHIPPING CONTAINERS

GENERAL ★★★★★ BOX COMPANY
GENERAL OFFICES
Corner of Illinois and Dearborn Sts., Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Brooklyn, Cincinnati, Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchenden, Natchez, Continental Box Company, Inc.: Houston, Dallas.

▲ Mention Item NED-5000 when writing ▲

JOHNSON UNIVERSAL BRONZE

IN STOCK FOR IMMEDIATE DELIVERY

Over 350 Sizes

Completely machined bars of the highest quality bearing bronze on the market. Complete stocks in every industrial center enables you to get the *right* size the day you want it. Write for stock list and location of nearest source of supply.

JOHNSON BRONZE
SLEEVE BEARING HEADQUARTERS
580 S. MILL STREET NEW CASTLE, PA.

▲ Mention Item NED-5007 when writing ▲

Marvinol®

NEW VINYL RESIN
offers these advantages

One: Products made from Marvinol may be crystal clear, brilliantly or delicately colored, tasteless and odorless . . . have greater resistance to heat, light, aging, oils, acids, other destructive factors . . . superior flexibility at low temperatures.

Two: High molecular weight gives Marvinol extra toughness; "dryness"... yet it is easy to formulate into film, coatings, rigids, elastomers.

Three: Marvinol is a development of Martin research and experience . . . is being produced in the world's most modern chemical plant.

Four: No division of The Glenn L. Martin Company compounds or fabricates in the plastics field. Technical cooperation is available through expert sales engineers and a fully equipped customer service laboratory. Write: Chemicals Division, The Glenn L. Martin Co., Baltimore 3, Md.

Martin Marvinol

Resins, Plasticizers and Stabilizers, Produced by The Chemicals Division of
THE GLENN L. MARTIN COMPANY—
AN INTERNATIONAL INSTITUTION
"Better Products, Greater Progress, Are Made By Martin."

▲ Mention Item NED-5001 when writing ▲

The "quick-return" spring
keeps this
"YANKEE"
in the slot... on the job

● Stop the fumbling in awkward applications that slows down assemblies. With a "Yankee" Driver with the "quick-return" spring, it's a one-hand, one motion operation. A push turns the screw. The spring returns the handle for another push and keeps the driver bit in the screw slot. Saves time, fatigue and costly bit slippage. Your industrial distributor has a full stock of this and other willing worker "Yankee" tools.

Quick-return style... Nos. 130A, 131A, 135
Standard style... Nos. 30A, 31A, 35

WRITE FOR THE "YANKEE" TOOL BOOK

NORTH BROS. MFG. CO.
Philadelphia 33, Pa.
"YANKEE" TOOLS NOW PART OF STANLEY
THE TOOL BOX OF THE WORLD

▲ Mention Item NED-5005 when writing ▲

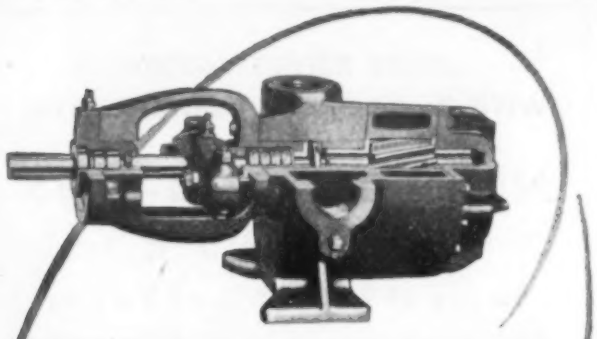
MacRae's Blue Book
The Complete Buying Guide for Every Industrial Product

Handy
Efficient
More Accessible
More Manageable

all in one book

For advertising rates call your agency or write to MacRAE'S BLUE BOOK COMPANY
18 E. Huron St., Chicago, Ill.

▲ Mention Item NED-5008 when writing ▲



Pumping Clean Liquids of all Kinds

Supplied in standard fitted or bronze fitted models to suit specific needs. Recommended for pressures up to 300 p.s.i. when pumping lubricating oils and 100 p.s.i. on non-lubricating liquids. All sizes furnished with packed box or built-in relief valve as desired. Roper pumps are built compactly to fit a wide range of application and mounting conditions. Send for Bulletin.

GEO. D. ROPER CORP.
667 Blackhawk Park Ave.
Rockford, Illinois

ROPER Rotary Pumps

▲ Mention Item NED-5009 when writing ▲

Here's the easy accurate way to measure vacuum

With the W&T Absolute Pressure Indicator, vacuum can be read directly and rapidly from a custom calibrated dial, in terms of pressure above absolute zero. This saves time and eliminates vacuum measurement trouble, such as the effect of barometric pressure changes and errors in computing corrections.

This instrument is so designed that five ranges — 0 to 20, 50, 100, 200, and 400 mm. of mercury absolute pressure — are available with a sensitivity in each range of one part in 500.

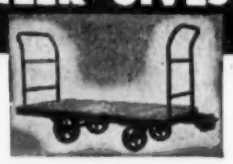
Write for Technical Publication 16A for details on this instrument that is already doing valuable work in vacuum distillation, food processing, refrigeration, and other important industrial and research fields.

WALLACE & TIERNAN PRODUCTS, INC.
ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey • Represented in Principal Cities

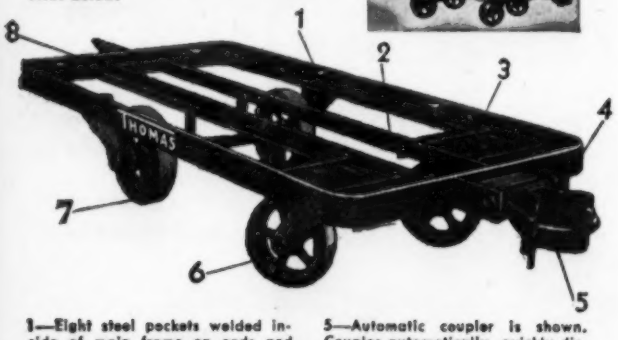
A-70

▲ Mention Item NED-5010 when writing ▲

Why the THOMAS "GENERAL" TRAILER GIVES EXTRA SERVICE



Capacity: normal rating, 4000 lbs., safe overload, 5000 lbs. See heavy duty features below:



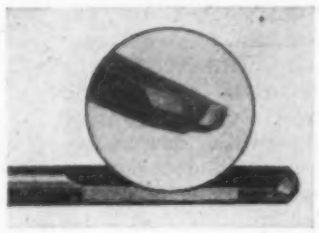
1—Eight steel pockets welded inside of main frame on ends and sides on approximately 23" centers, for racks of 1 5/16" steel tubing.
2—Two lengthwise frame members and deck support of 2" x 2" steel.
3—Double ball race swivel caster with ⅝" steel top plate welded in frame and inner sill. Seven-inch ball bearing load race with 35 steel balls, ⅝" diameter.
4—Corners rounded on approximately 4" radius. No projections.
5—Automatic coupler is shown. Couples automatically, quickly disengages with foot operated release.
6—Heavy duty steel caster fork, with 3½" lead assuring easy manipulation, accurate trailing qualities, and no tendency to shimmy.
7—Rugged rear axle boxes, welded to frame and two flat steel center axle supports. Tubular axle spacer maintains wheels in alignment.
8—Main frame: 3" x 2" structural steel angle butt joined and held at each joint by welding.

Write for Trailer Catalog

THOMAS TRUCK and CASTER CO.
3250 MISSISSIPPI RIVER, KEOKUK, IOWA

▲ Mention Item NED-5011 when writing ▲

DRILL FOR HARDENED STEEL



Made of carbide, this tool is capable of drilling high speed steel as hard as Rockwell 66 C. Holes 1-inch deep are drilled in as little as 60 seconds with negligible wear on drill. Tool is ground to provide maximum cutting speed with minimum generation of heat, resulting in long drill life. Smooth holes, true to size without annealing, are thus produced. Made by **National Tool Salvage Co.**, 6511 Epworth Blvd., Detroit 10, Mich.

▲ Mention Item NED-5012 when writing ▲

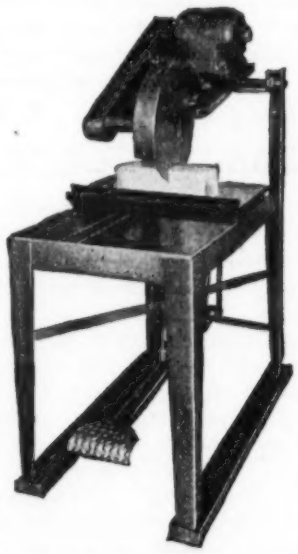
BARREL TRUCK

Constructed of heavy steel tubing and plate, barrel and drum truck handles loads up to 1000 pounds. To load, truck is shoved against barrel or drum, sliding steel catch is dropped over rim, and operator pulls on handles. Since maximum width is only 22 inches, truck can be maneuvered through crowded aisles and narrow doorways. It can be supplied with pneumatic or rubber tires on metal wheels. Made by **Palmer-Shile Co.**, 16015 Fullerton Ave., Detroit 27, Mich.

▲ Mention Item NED-5013 when writing ▲

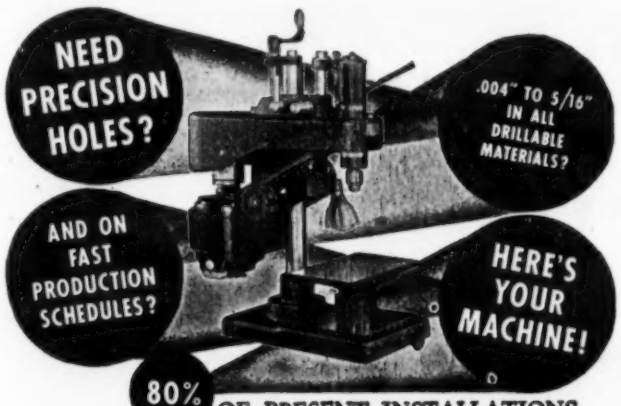
MASONRY CUTTING SAW

Designed for either wet or dry operation, this model R abrasive cut-off saw will make fast and accurate cuts in all types of masonry or ceramic materials. Power is supplied by 1½-horsepower totally enclosed motor, and cutting head of machine can be raised or lowered by means of foot pedal or locked down for either cutting or scoring. Either abrasive or diamond blades can be used.



Saw unit incorporates self-priming centrifugal pump and self-contained water system for wet cutting operations. Rubber pump impeller is unaffected by dust, grit and abrasive particles. All belts are covered, and blade guard provides for maximum operator protection. Model D-250 Jade segmented diamond blades or D-100 Jade kerfed diamond blades are recommended for cutting dense, hard ceramic materials having fine aggregate. Made by **Champion Mfg. Co.**, Dept. XX, 2028 Washington Ave., St. Louis 3, Mo.

▲ Mention Item NED-5014 when writing ▲



80% OF PRESENT INSTALLATIONS ARE REPEAT ORDERS!

Precision manufacturers who have "tried out" the Hamilton Varimatic, Super Sensitive, Variable Speed Drilling Machine have found it so efficient in the drilling of small, precision holes on fast production schedules that 80% of our present installations represent repeat orders.

Investigate its many exclusive features. Our Bulletin V-47 gives complete information. Write for it today!

THE Hamilton TOOL COMPANY
SUPER SENSITIVE DRILLING MACHINES · TAPPING MACHINES · PORTELVATORS
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

▲ Mention Item NED-5015 when writing ▲

The HEAVIER the PULL the GREATER the GRIP

with this ingenious Wedge Lever Principle
MERRILL-VOLZ CLAMP
for raising, lowering and conveying any Flat Surface Metal Sheets, Plates, Drums, etc.

Drop Forged throughout of Special Steel.

Powerful—Fool-proof

Sizes—

½, 1, 3 and 6 Tons.

Larger sizes to order.

Write

MERRILL Brothers
(Under Same Family Management for over ¾ of a Century)
56-13 Arnold Avenue Maspeth, N. Y.

▲ Mention Item NED-5016 when writing ▲

Over 525,000 Sold

- Quicker Heating
- Small Size
- Light Weight
- One Moving Part
- Low Price

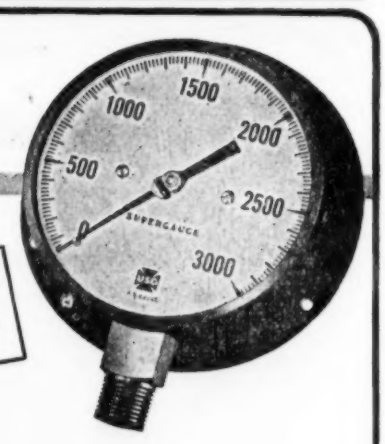
Sold by nearly 150 Mill Supply Distributors throughout the U. S. A.

See your supply house or write for Catalog T-739

YARNALL-WARING CO., 131 Mermaid Ave., Phila. 18, Pa.

YARWAY
IMPULSE STEAM TRAP

▲ Mention Item NED-5017 when writing ▲



6 out of 10 manufacturers of original equipment SPECIFY USG

Tomorrow's accuracy is here today in the new U. S. Supergauge. Get complete information about this superb instrument now.

U.S. INSTRUMENTS Tell The Truth

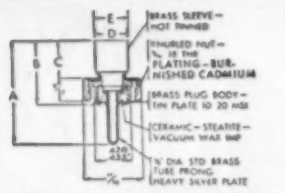
UNITED STATES GAUGE

USG

DIVISION OF AMERICAN MACHINE AND METALS, INC., SELLERSVILLE, PENNA.
Manufacturers of Pressure, Temperature, Flow and Electrical Measuring Instruments

▲ Mention Item NED-5018 when writing ▲

Ideal for
ANTENNA CONNECTIONS
PHOTO-CELL WORK
MICROPHONE CONNECTIONS



SUPPLIED IN 1 & 2 CONTACT TYPES

JONES
SHIELDED TYPE
PLUGS & SOCKETS

LOW LOSS PLUGS AND SOCKETS FOR HIGH FREQUENCY CONNECTIONS

For quality construction thru-out, and fine finish, see diagram above.

101 Series furnished with 1/4", .290", 5/16", 3/8", or 1/2" ferrule for cable entrance. Knurled nut securely fastens unit together. Plugs have ceramic insulation; sockets bakelite. *Assembly meets Navy specifications.*

202 Series Phosphor bronze knife-switch type socket contacts engage both sides of flat plug contacts—double contact area. Plugs and sockets have molded bakelite insulation.

For full details and engineering data ask for Jones Catalog No. 16.

JONES MEANS *PROVEN* QUALITY

HOWARD B. JONES DIVISION
Cinch Mfg. Corp.
2460 W. GEORGE ST. CHICAGO 18, ILL.

▲ Mention Item **NED-5019** when writing ▲

DART LEADERSHIP
IS BASED ON THESE
Proven Advantages

SPHERICAL CONTACT
These two seats in each Dart Union are spherical-ground to form a *true ball joint* that's drop tight and leakproof.

PROPER ALLOYS
Both seats are made of bronze—which means they're *non-corroding* . . . longer lasting.

TROUBLE-FREE DESIGN
Darts close without damage, jamming, or excessive wrenching. Body and nut are made of high-test, air-refined malleable iron . . . practically indestructible.

For these and other Dart advantages, order *today* from your supplier.

E. M. DART MFG. CO. PROVIDENCE 5, RHODE ISLAND

▲ Mention Item **NED-5020** when writing ▲

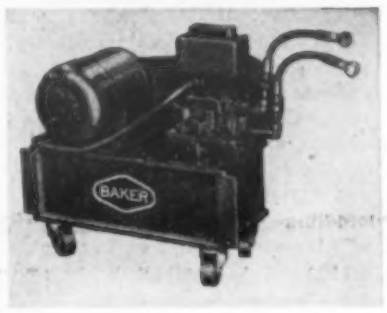
Designed and built to your specific needs, Fab-Weld all-steel equipment means top economy, strength and durability. Trucks, dump hoppers, skids, racks and bin boxes are examples of Fab-Weld geared-to-the-job engineering. Many variations of these essential forms of materials handling equipment have been designed and built for our clients, as well as many other special types for use with difficult-to-handle products.

Write our Materials Handling Division for full details. Representatives in all principal cities.

FAB-WELD CORPORATION
SALMON & PICKWICK STS.
PHILADELPHIA 34, PA.

▲ Mention Item **NED-5021** when writing ▲

HYDRAULIC POWER UNIT

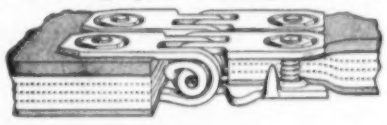


Portable hydraulic power unit can be attached to hydraulically actuated equipment by means of high-pressure hose lines equipped with self-sealing couplings that permit breaking lines without influx of air into system. Unit incorporates model JK10203 variable delivery Oilgear feed pump of positive displacement, radial piston type. Features include ready exchangeability of power units whenever desirable, and numerous advantages of permanent type hydraulic systems. Casters provide portability. Made by **Baker Brothers, Inc.,** 1000 Post St., Toledo, O.

▲ Mention Item **NED-5022** when writing ▲

CONVEYOR BELT FASTENER

Consisting of a series of U-shaped galvanized plates bolted to each end of conveyor belt and then joined together by means of flexible hinge pin, this hinged Flexco conveyor belt fastener can be used with belts ranging from 3/8 to 1/2-inch in thickness. Belt ends are cut in concave arc, and hinge pin, made of tightly wound spring steel, bends easily with troughing of belt. A 30-inch fastening will withstand pull of from 18,000 to 22,000 pounds depending upon belt construction. Made by **Flexible Steel Lacing Co.,** 4607 Lexington St., Chicago 44, Ill.



▲ Mention Item **NED-5023** when writing ▲

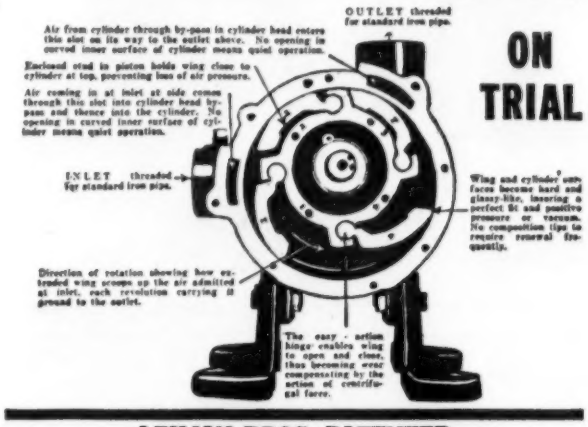
SMALL CIRCUIT BREAKER

Small size, shock resistant circuit breaker is capable of interrupting 5000 amperes at 125 volts alternating current and withstands mechanical impact up to approximately 150 foot-pounds. It is recommended for use on street transit systems, railway service, marine applications and similar places where vibration is prevalent.

Damping is accomplished by specially shaped bimetal overload element. Use of over-center principle in circuit breaker mechanism, alloy contacts and De-ion arc extinguisher make possible fast-acting break with small contact separation. Breaker is arranged for front-of-panel or rear-of-panel mounting and is 3 inches long, 2 1/8 inches deep and 1 inch wide. Made by **Westinghouse Electric Corp.,** P. O. Box 868, Pittsburgh 30, Pa.

▲ Mention Item **NED-5024** when writing ▲

AIR PRESSURE or VACUUM
for PAPER FEEDERS
BOTTLE FILLERS
GAS FURNACES
ATOMIZING AND ALL AUTOMATIC MOVEMENTS



ON TRIAL

LEIMAN BROS. PATENTED
VACUUM **ROTARY AIR PUMPS** PRESSURE
TAKE UP THEIR OWN WEAR

LEIMAN BROS. 167-3 Christie St. NEWARK, N. J.
MAKERS OF GOOD MACHINERY FOR 50 YEARS

▲ Mention Item **NED-5025** when writing ▲

EVERY ENGINEER will want a copy of this new BULLETIN

It's easy to get the right answer for even the most special jobs when you use Hannifin's new hand-book on HYDRAULIC CYLINDERS. 52 pages of helpful specification and engineering data, complete with diagrams and dimensions. The Hannifin line is complete! 12 standard bore diameters, 1" to 8" . . . any length stroke you specify . . . 11 standard mounting styles . . . standard, double end, or heavy duty. (2:1) piston rods . . . available with adjustable cushions . . . pressures to 1500 lbs. per sq. in. Special types to order. Write for Bulletin 110-R.

HANNIFIN CORPORATION
1101 S. Kilbourn Ave., Chicago 24, Ill.

▲ Mention Item **NED-5026** when writing ▲

CASH IN ON "CRANEPOWER"

LORAIN CUTS HANDLING TIME 2/3

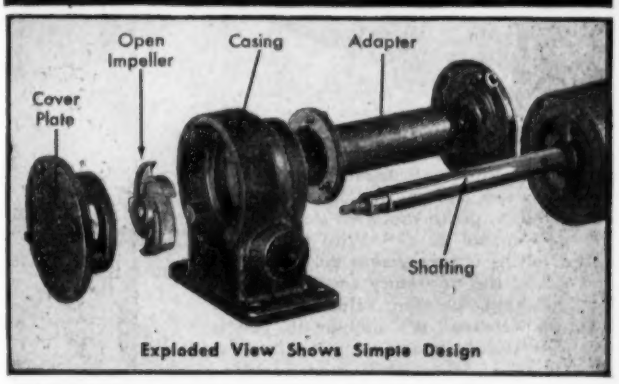
"Cranepower" pays off daily in the yards of the Heller Tin Compress Corp., Peoria, Ill. Using an orange peel bucket for "farm scrap" and an electric magnet for the heavier lifts, this Lorain-41 crane handles 150 to 200 tons daily in 1/3 the time required previously.

Lorain "cranepower" is versatile. Use of more than 15 different crane attachments enables this unit to be a material handling handyman. Lorain cranes are available as crawler units or with rubber-tire mountings (self-propelled or 2-engine types). See your local Thew-Lorain distributor for complete information.

The Thew Shovel Company
LORAIN, OHIO

▲ Mention Item **NED-5027** when writing ▲

Allis-Chalmers Announces . . .
2 New Coolant Pumps



Exploded View Shows Simple Design

THESE NEW seal-less type pumps—*vertical submerged* and *sidewall mounted*—are built for general circulating duty and machine tool applications. They are particularly suited to handling liquids with considerable amounts of solids, chips or suspended abrasive particles. Suction ports are above and below impeller so that adapter is always under suction head. No need for wearing rings, close impeller hub or adapter clearance. Cast, corrosion-resistant, zinc-free impellers. Sizes 1/4 to 1 hp. Bulletin 52B6975 covers complete coolant pump line. A 2469

ALLIS-CHALMERS
MILWAUKEE 1, WISCONSIN

▲ Mention Item **NED-5028** when writing ▲

How do you clean a fluid filter

without Stopping or By-Passing Flow?

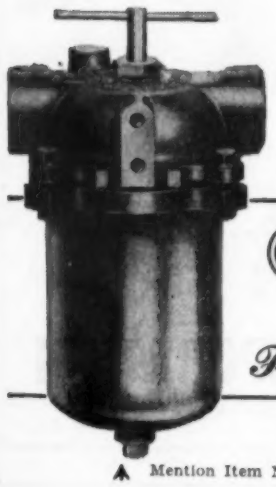
Cuno AUTO-KLEAN gives you *continuous* cleaning of full flow in a compact design no larger than usual partial-flow types.

Metal discs stop all solids larger than specified spacing* . . . turning of discs past stationary cleaner blades combs out solids. Can be cleaned periodically by manual turning of handle or continuously by motor drive. Widely used on lubricating, hydraulic, and fuel oils, water, and other industrial fluids.

FREE BULLETIN

Address Cuno Engineering Corp., 707 South Vine St., Meriden, Conn.

*Available spacings from .0035 in. to .062 in.



CUNO

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

Mention Item NED-5029 when writing

NEWARK

DESIGN and PRODUCTION of WOVEN WIRE PARTS

NEWARK for ACCURACY

Why not allow us to do a "from start to finish" job on your fabricated wire cloth parts? What do we propose to do? Assist you with the design, set up the necessary tooling, make the wire cloth . . . it's the well known Newark Wire Cloth long noted for its accuracy and durability . . . and do all the necessary cutting, stamping, punching, welding, soldering, seaming and bending. We deliver to you a finished product in any quantity desired. We are equipped to handle your requirements on a quantity production basis. May we quote on your next requirements?

* * *

We also manufacture a complete line of industrial wire cloth in all commercial malleable metals.

Newark Wire Cloth COMPANY

332 VERONA AVENUE • NEWARK 4, NEW JERSEY

Mention Item NED-5030 when writing

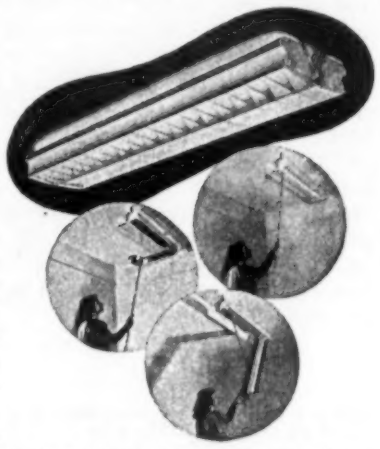
MAGNESIUM BARREL SKIDS

Lightweight Magcoa magnesium barrel skids weigh 25 pounds per 7-foot length and will handle up to 1000 pounds. Rounded slide beam surface minimizes friction and damage to barrels. Construction is sturdy, and all joints are welded. Standard widths permit handling of 22-inch or larger diameter drums and barrels. Sizes range from 7 feet x 13 inches to 12 feet x 15 inches. Made by **Magnesium Co. of America**, East Chicago, Ind.

Mention Item NED-5031 when writing

FLUORESCENT LAMP FIXTURE

Featuring a Jacknife hinge that permits fixture servicing from floor level without ladder, this Guth-Lite is designed to provide efficient high-quality illumination with two 40-watt or two 100-watt lamps. Lightweight maintenance rod facilitates servicing and cleaning, and operations can be accomplished without disrupting work routine. Maintenance rod is used to lower reflector assembly which includes lamps, lampholders, starters, ballast, wiring, reflectors and louvers. Regular cleaning assures maximum lighting efficiency. Made by **Edwin F. Guth Co.**, 2603 Washington Blvd., St. Louis 3, Mo.



Mention Item NED-5032 when writing

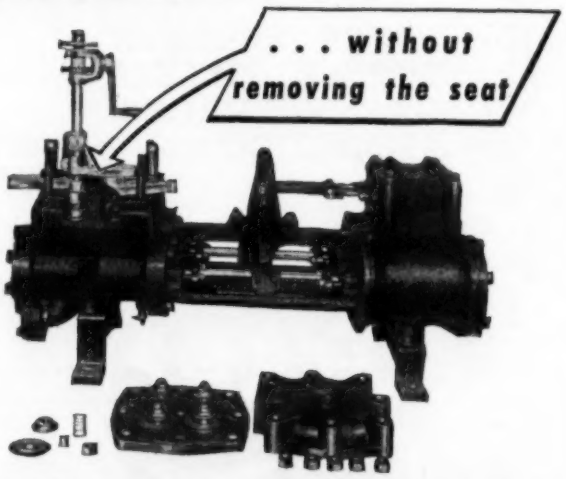
ELECTRICAL TESTER

Suitable for checking circuits and components in electrical, radio and electronic equipment, model 10-F Range-Master covers 25 ranges and will check capacity, alternating current voltage and amperage, direct current voltage and amperage, and resistance. Features include built-in fuse, direct-reading meter, Manganim wire-wound shunt, Carbofilm multipliers and hinged oak carrying case. Illustrated bench model has Bakelite case. Made by **Bradshaw Instruments Co.**, 348 Livingston St., Brooklyn 17, N. Y.

Mention Item NED-5033 when writing

RESEAT . . .

. . . without removing the seat



Attach a *Dexter* Pump Valve Reseating Outfit to the head bolts and reface the lower and upper deck seats *right in the pump.*

Save time . . . save money. One man can do the job easily and quickly.

Dexter Outfits immediately available in sizes to fit 2" to 7½" seats.

VP-74

THE LEAVITT MACHINE COMPANY 190 E. RIVER ST. ORANGE, MASS.

AUTOMATIC AIR SEPARATORS • DRAINS • LATHE CHUCKS

Dexter VALVE RESEATING MACHINES

Mention Item NED-5034 when writing

DIAL TEST INDICATOR No. 743

. . . WITH FINE ADJUSTMENT AND MAGNETIC BASE

This new indicator makes difficult tests easy. Permanent magnet base holds indicator firmly to any iron or steel surface—in upright, horizontal or even upside-down position. Magnet action produced by swing lever. Fine adjusting nut is used to bring indicator point to exact setting desired.

For complete information on this and other new measuring tools recently added to the Brown & Sharpe line, write Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

We urge buying through the Distributor

BROWN & SHARPE BS

Mention Item NED-5035 when writing

STURDY, VERSATILE AMERICAN CONVEYORS HELP SPEED PRODUCTION

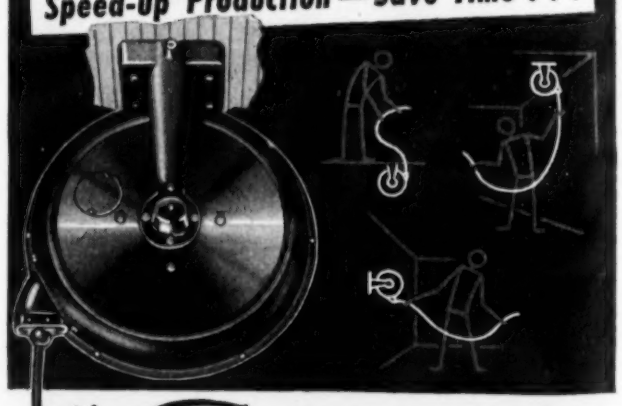
They've proven themselves indispensable to industry . . . provide a quick and efficient means of conveying many kinds of raw and manufactured materials both within the plant and outdoors. They're portable, electrically operated, and come in a variety of sizes and types, including cleated belt models. Learn how AMERICAN CONVEYORS can help **increase your plant efficiency**—write for information **TODAY**.

NED

AMERICAN CONVEYOR COMPANY
1112 W. Adams St. • Chicago 7, Ill.

Mention Item NED-5036 when writing

Cut Air-Hose Costs — Prevent Accidents Speed-up Production — Save Time . . .



with **CHAMPION AIR-HOSE REELS**

FOR CEILINGS—WALLS AND FLOORS

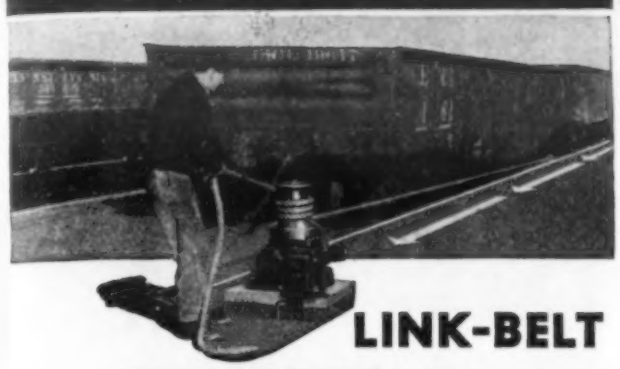
Champion Air-Hose Reels more than pay for themselves in the hose they SAVE. Champion Reels keep hose *off-the-floor,* eliminate the danger of tripping. Air-hose is always convenient to operator . . . a time saver that speeds-up production. Stays put at desired length—a slight pull rewinds hose at governed speed. Fully enclosed reel housing with swivel or stationary mounting. Furnished with 30 or 35 foot hose. Write TODAY for complete data sheet.

2616

CHAMPION PNEUMATIC MACHINERY CO.
8180 SOUTH CHICAGO AVENUE • CHICAGO 17, ILLINOIS

Mention Item NED-5037 when writing

Money Saving "Yard Bird"

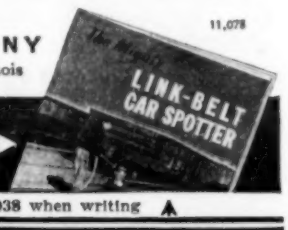


LINK-BELT

Electric Car Spotter

● This powerful little capstan quickly repays its cost, and dividends thereafter, in SAVING TIME, SAVING MONEY and CUTTING MAN-HOURS in industrial plants doing such heavy jobs as spotting cars, handling transfer cars, bending pipe, warping barges, dragging heavy materials, etc. Does the work of a crew, with only ONE MAN. Stationary or portable models with integral or separate motors.

LINK-BELT COMPANY
2410 W. 18th St., Chicago 8, Illinois



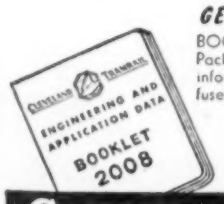
SEND NOW for Book No. 1992

Mention Item NED-5038 when writing

GANTRY CRANES SAVE TIME

Cost Fraction of Heavy Overhead Crane

If your overhead crane is loaded with work, consider the addition of single-leg gantry cranes to work under it. You can free it of much of the lighter work and eliminate costly waiting time of skilled workers. Several gantries can be purchased for the price of a single heavy overhead traveling crane. Supplied for hand or electric operation.



GET THIS BOOK!
BOOKLET No. 2008
Packed with valuable information . . . Profusely illustrated.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6622 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

Mention Item NED-5039 when writing

How would you like to transmit

3 hp with a 2" gear set?
(center distance)

or

632 hp with an 18" gear set?
(center distance)

Impossible? These are the actual ratings of some Cone-Drive gear sets at 1750 rpm. The larger gear set can actually handle, at 100 rpm **600,000 INCH POUNDS of torque.**

These *standard* Cone-Drive gear sets—with their greater contact per tooth and MORE TEETH IN CONTACT—are available in ratios of 5:1 to 70:1 and from fractional hp to hundreds of horsepower.

Write for complete information today, giving your approximate hp or torque, and speed requirements.

CONE-DRIVE DIVISION
MICHIGAN TOOL COMPANY
7171 E. McNichols Road • Detroit 12, U. S. A.

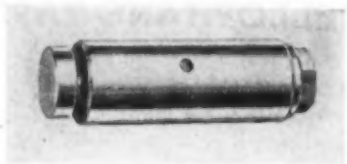
Mention Item NED-5040 when writing

AIR CIRCULATING FAN

Designed for use in factories and commercial plants where mass movement of air is essential to employee comfort and efficiency, this model M-351 Man Cooler air circulating fan handles approximately 10,000 cubic feet of air per minute. It is powered by 1/6-horsepower capacitor type two-speed enclosed General Electric motor. Push-button switch mounted on safety guard can be relocated on wall. Removable safety guard facilitates fan cleaning. Overall height can be adjusted through range of from 66 to 90 inches. Wall or post mounting is available also. Made by **Fresh'nd-Aire Co.,** 221 N. LaSalle St., Chicago 1, Ill.

Mention Item NED-5041 when writing

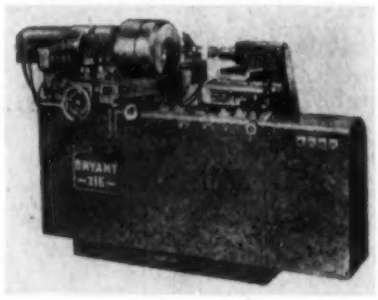
REVOLVING STOCK STOP



Designed to position end of stock at specified distance from collet nose, this revolving stock stop is available in sizes for use on Nos. 00 short, 00A long, 20 short, 20A long, 22 short and 22A long turrets. Head of stop is hardened and ground. Thrust of head is taken by ball which allows head to rotate freely and prevents marring of outer end of workpiece. Unit is especially recommended for use when marks which might be left on end of workpiece by solid stop are objectionable. Made by **Brown & Sharpe Mfg. Co.,** Dept. 43, Providence 1, R. I.

Mention Item NED-5042 when writing

HYDRAULIC INTERNAL GRINDER



Precision, high production, model No. 216 internal grinder is hydraulically operated machine for producing work with bores up to 8 inches in diameter and 6 inches in length. It has 16-inch swing inside standard water guard and 15-inch total wheel slide traverse. Swing is limited to 12 inches when grinding tapers greater than 15-degree included angle.

Cross feed is obtained by lateral motion of work table which is supported by roller bearings. Various movements of machine are hydraulically powered to afford flexibility of operation. Electric cycle control can be changed to meet varying requirements. Sizing from diamond is accomplished by grinding predetermined amount beyond wheel truing position, and compensation for wheel wear is automatic. Made by **Bryant Chucking Grinder Co.,** 100 Clinton St., Springfield, Vt.

Mention Item NED-5043 when writing

"Hearing is Believing"

THAT AMERICAN PHILLIPS SCREWS

Cut Costs

when you listen to makers of Electronic Products like these:

Says one hearing-aid manufacturer, "American Phillips Screws save us as much as 50% in time alone—and what they've saved us by banishing spoilage runs into even *more* money!" Simply because American Phillips Screws can't slip, can't slash, *can't drive any way but straight.* And because they're so much easier to handle, aim, and drive . . . without "dropsy." Find out what American Phillips Screws can do for *your* product. Write.

AMERICAN SCREW COMPANY, PROVIDENCE 1, RHODE ISLAND
Chicago 11: 589 E. Illinois St. Detroit 2: 505 Stephenson Building

AMERICAN PHILLIPS Screws

Mention Item NED-5044 when writing

THE R & M STEEL HOIST
Capacity: 1000-20,000 lbs.

Here's a husky Robbins & Myers hoist that will move your heavy loads quickly, safely, surely! It's a modern answer to the pressing need for low-cost materials handling . . . for keeping production rolling . . . for higher worker efficiency and more output.

MAKE LIFTING EASY ALL AROUND

Robbins & Myers hoists are built to do the job right. Instant response to simple push-button, pendent-rope, or remote control. Automatic brakes that hold without "drift." Totally enclosed R & M motors. Low headroom. Stationary, hook, or trolley mounting. Trouble-free operation. Negligible maintenance. Types and sizes for all needs.

Put these time-saving labor-aids to work in your plant. They'll pay for themselves many times over. Write for free descriptive literature.

ROBBINS & MYERS, INC.
HOIST & CRANE DIVISION, SPRINGFIELD 99, OHIO

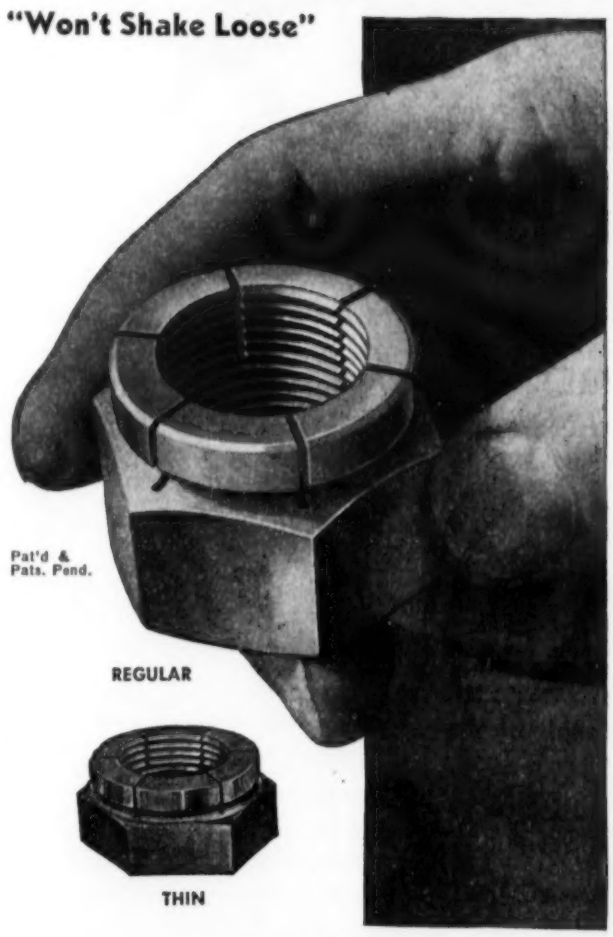
Mention Item NED-5045 when writing

ASK FOR SAMPLES

FLEXLOC ONE-PIECE

SELF-LOCKING NUTS

"Won't Shake Loose"



The one-piece, all-metal "Flexloc" packs maximum usefulness in minimum space by combining, as it does, a stop, a lock and a plain nut all in one.

Every thread—including the locking threads—takes its share of the load. "Flexloc" accommodates itself to a wide range of thread tolerances . . . can be used over and over again without losing much of its locking torque . . . is not affected by temperatures likely to be met within the field of Mechanical Engineering . . . and being a "stop" nut, it stays locked in any position on the threaded member. The "Flexloc" is processed to have an exceptionally uniform torque.

The *Thin* "Flexloc" has become very popular because its *tensile* is so high and the space it occupies so small.

Sizes from #6 to 2" in diameter—in "regular" and "thin" types—in NC and NF thread series. Write for "Flexloc" Catalog.

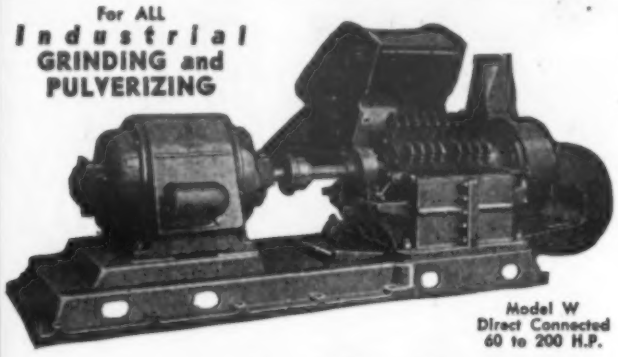
OVER 45 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PA. Box 581
BOSTON • CHICAGO • DETROIT • INDIANAPOLIS
ST. LOUIS • SAN FRANCISCO

Mention Item NED-5046 when writing

For ALL Industrial GRINDING and PULVERIZING



Model W
Direct Connected
60 to 200 H.P.

JAY BEE Hammer Mills

Jay Bees Grind ANYTHING grindable—from feathers to firebrick

Increase Capacity — Reduce Operating Costs

Whatever you grind . . JAY BEE Mills solve your problems with notable efficiency. Strength, durability and precision of operation are combined to give you a maximum of continuous operation, capacity and quality grinding at a minimum cost.

JAY BEE Mills, result of over 25 years of manufacturing experience, are made in many sizes and models . . 12 to 200 H.P., for Belt, V-Belt or Direct Connected drives . . for every grinding and pulverizing purpose. It will pay you to write for details.

J. B. SEDBERRY, INC.
Franklin, Tennessee

▲ Mention Item NED-5047 when writing ▲

...it's from HERE

to HERE

It's easy to define the "comfort zone" in a plant. It's that eight or ten feet above the floor that must be heated for employee comfort. But it's quite another matter to heat it economically and effectively when thirty feet of air space extend above it to the roof.

Such a problem faced Minweld Steel Company in its new fabricating plant in Pittsburgh—and a Dravo *Counterflo* Heater solved it.

This powerful unit discharges warm air above the heads of the workers, circulates it through the working

area, and returns it without drafts to the base of the heater for reheating and recirculating. An automatic thermostat maintains uniform heat throughout the 6,500 square foot working area—even though two 19-foot square truck doors open at each end, and metal-siding walls are broken by an abundance of windows. Although shut off at night, the unit furnishes heat so quickly that only fifteen minutes are required to warm the plant in the morning.

Bulletin JL-516 contains more complete information. Write Heating Section, Dravo Corporation, Dravo Building, Pittsburgh 22, Pennsylvania.

"In a recent two week period," Owner William Minnotte says, "we estimated a saving of twenty man-hours because our men didn't have to stop work and try to get warm around old-fashioned coal stoves. Increased productivity, of course, is also tied to the increased comfort of employees."

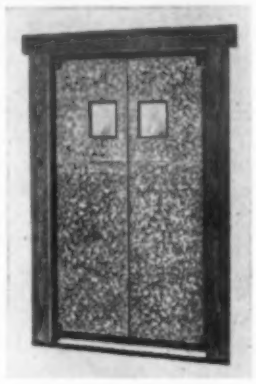
Dravo also manufactures the DRAVO CRANE CAB COOLER for air conditioning hot-metal crane cabs.

DRAVO CORPORATION
PITTSBURGH • CLEVELAND • PHILADELPHIA
DETROIT • NEW YORK • CHICAGO • ATLANTA • BOSTON
Sales Representatives in Principal Cities
Mfd. and sold in Canada by: Marine Industries, Ltd., Sorel, Quebec

DRAVO

▲ Mention Item NED-5048 when writing ▲

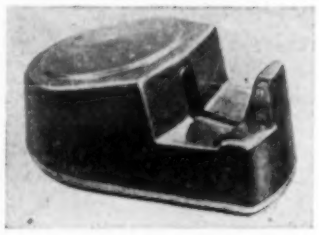
SWINGING INDUSTRIAL DOORS



Metal clad, insulated, swinging industrial doors can be pushed aside by running industrial trucks or other heavy duty transportation conveyance truck through them, and they return to original position automatically after truck has passed. Because they provide fire-resistance, afford privacy and prevent heat loss, doors are particularly suitable for installation in warehouses, railroad freight stations and manufacturing industries. As doors swing open, they lift slightly and move two-way gravity cam which operates in fully enclosed housing bolted to upper portion of side jamb and head jamb. Return of cam by gravity closes doors. Made by **Jamison Cold Storage Door Co.**, Hagerstown, Md.

▲ Mention Item NED-5049 when writing ▲

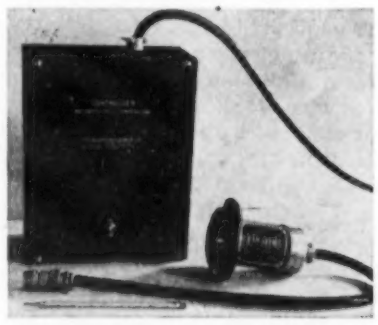
CELLOPHANE TAPE DISPENSER



Designed to deliver Cellophane tape in vertical position, this dispenser has pearl-gray shatterproof plastic cover, cast-iron base and sponge rubber footing which provides stability and protection to surface on which it rests. Vertical cutter bar provides easy finger grip for one-hand operation. Plastic cover keeps tape dust-free. Dispenser is available for use with Texcel tape in rolls in widths from ¼ to 1 inch. Made by **Industrial Tape Corp.**, Dept. R, New Brunswick, N. J.

▲ Mention Item NED-5050 when writing ▲

TEMPERATURE CONTROL UNIT

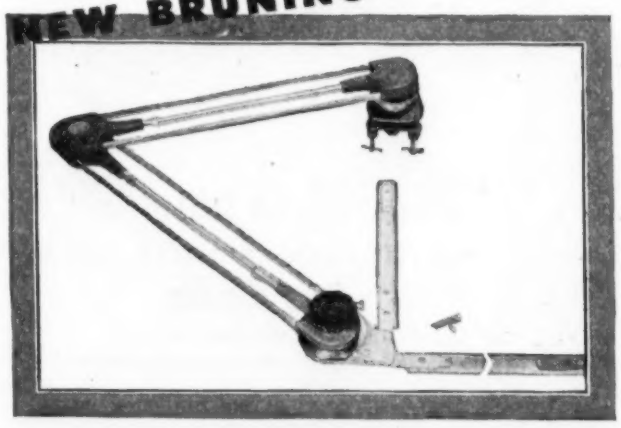


Designed to provide accurate temperature control between ambient and 1000 F, this low-range Radiamatic radiation pyrometer system is especially useful where measuring device does not or cannot come into contact with materials or processing equipment. System consists of constant temperature box, thermopile, and electronic recording device which makes permanent record of temperatures. Unit will respond to temperature changes of 1 or 2 F within span of ambient temperature to 212 F.

Unit is offered as uncalibrated system only, since any calibration would depend upon its use under black body conditions or on target of known emissivity. Sighting tubes or sight-limiting devices can be tailored to application. Made by **Brown Instrument Co.**, 4529 Wayne Ave., Philadelphia 44, Pa.

▲ Mention Item NED-5051 when writing ▲

NEW BRUNING

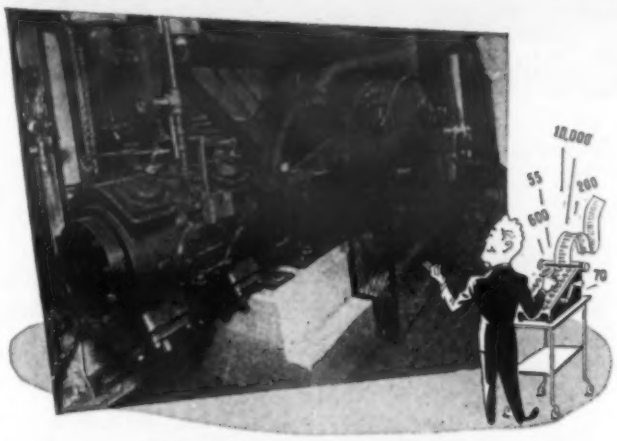


EQUIPOISE DRAFTERS

New smoothness in drafting—greater accuracy—unhampered speed are features of the new Bruning Equipoise Drafters—made in two models, Standard and Civil Engineer's. The Equipoise mechanism, a spring balancing device, assures accurate alignment of the machine at all times on an inclined drawing board. The Equipoise Drafter "floats" into any operating position without heavy brake drag. A revised protractor head assembly permits greater convenience in operation and maximum visibility—a new base line setting device for locking the protractor index point to any desired angle is simple in operation and positive in action. For complete information write Charles Bruning Company, Inc., 4730-68 Montrose Ave., Chicago 41, Ill.

BRUNING SINCE 1897

▲ Mention Item NED-5052 when writing ▲



PISTON DISPLACEMENT
up to 1,044,367,200 C. F. Y.
(1,047,228,480 cu. ft. each leap year)

Maybe it's a bit on the optimistic side to claim that a Worthington Single Horizontal Compressor, Type HB, will keep going 24 hours a day, 365 days a year. But, the more you look into the line of 29 rugged machines (ranging in size from 5" x 5" to 26" x 13"), the more clearly you'll see that everything about them adds up to continuous, heavy-duty operation . . . year after year.

For complete details, write for Bulletin L-640-B1A which proves *there's more worth in Worthington. Worthington Pump and Machinery Corporation, Compressor Division, Buffalo, New York.*

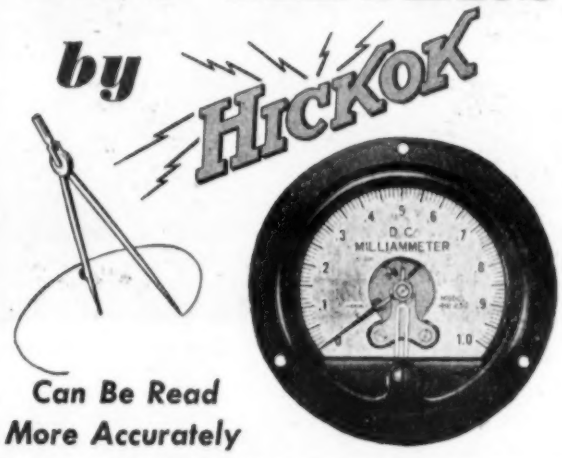
NO OTHER COMPRESSOR WILL OUTPERFORM A WORTHINGTON

WORTHINGTON

K7-4A

▲ Mention Item NED-5053 when writing ▲

250° METERS by HICKOK



Can Be Read More Accurately

These improved Hickok meters can be read more accurately with less eyestrain. A scale length 2½ times longer than conventional meters makes possible correct and more positive readings—in less time. Available in Milliammeters, Microammeters, Voltmeters, etc. In all popular A. C. and D. C. ranges. Case widths and diameters as small as 2½". Built by HICKOK—maker of finer meters since 1910. Kindly give details of your requirements in writing for literature.

THE HICKOK ELECTRICAL INSTRUMENT COMPANY
10547 DUPONT AVENUE, CLEVELAND 8, OHIO

▲ Mention Item NED-5054 when writing ▲

Here's a welting to give added *good looks* and *longer wear* to your slip covers! Here's why CHEMCLAD Plastic Welting will build customer good will and peak profits, *for you*—

- Outlasts any existing coated cloth welting.
- Adds the modern, "better made and more expensive" look.
- Has no fibrous backing to become wear-exposed.
- Drapes and handles easily for any sewing.
- In bright colors (contrasting color schemes only).
- *Costs the same or less* than the welting you are now using!

Also . . . ANY AND ALL PLASTIC EXTRUDED SHAPES . . . No matter what your requirements in extruded plastics are, we can serve you. We invite the inquiry of all fabricators.

CAROLINA INDUSTRIAL PLASTICS Corp.
CHEMCLAD *Plastic Products*
MOUNT AIRY, NORTH CAROLINA

▲ Mention Item NED-5055 when writing ▲

You Get Mechanical, Operational and Payroll Savings from these Scales...

If you sack free flowing materials from several hoppers, but volume is insufficient for fixed installations, investigate the new EXACT WEIGHT portable sacking scale. These units do everything fixed units do yet save expensive fixed equipment costs as well as labor costs. These scales feature accuracy and speed plus mobility. Bring your plant up to top efficiency without over spending. Remember you get mechanical, operational and payroll savings out of modernization. All this gives you better working margins . . . better pricing freedom. Sacking operations are costly when they are wrong. An EXACT WEIGHT Sacking operation is generally a very profitable investment. Write for full details.

INDUSTRIAL PRECISION
Exact Weight Scales

THE EXACT WEIGHT SCALE COMPANY
129 W. Fifth Avenue, Columbus 12, Ohio
783 Yonge St., Toronto 5, Canada

▲ Mention Item **NED-5056** when writing ▲

A great variety of Products and Parts are now made by PLASTICS FABRICATION

•

It might pay you to look into the advantages of:

- Lighter Weight
- Sparkling Beauty
- Improved Design
- Practical Utility
- Lower Cost

•

Consult FABRI-FORM on Plastics Fabrication

Our experience and facilities, trained personnel, machines and equipment are ready to meet your exacting requirements. Send your inquiry or blue prints for prompt attention.

SEND FOR *Bulletin* ON PLASTICS FABRICATION

Free Illustrated Bulletin shows all kinds of fabricated plastic parts used in many industries.

THE *Fabri-Form* CO.
108 SENECA ST. • BYESVILLE, OHIO

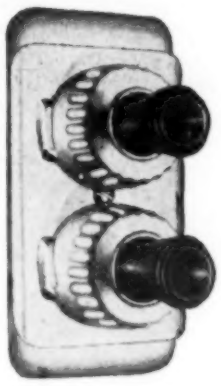
▲ Mention Item **NED-5057** when writing ▲

WIRE MESH ENCLOSURES

Toolrooms, stockrooms, storage spaces, shop offices and other areas requiring protection against unauthorized entrance can be partitioned off with these interchangeable standard or heavy duty Acorn wire mesh panels. Improved through use of nontelescoping 1¼-inch line posts, mesh panels are finished in olive green enamel. Installation is accomplished easily and quickly by inexperienced workmen. Interchangeable design permits forming of corner at any panel intersection or location of door between any sections. Standard sizes are 7, 8, 9 and 10 feet high by 5 feet wide. Special sizes and other finishes can be supplied on order. Made by **Acorn Wire & Iron Works,** 5910 Lowe Ave., Chicago 21, Ill.

▲ Mention Item **NED-5058** when writing ▲

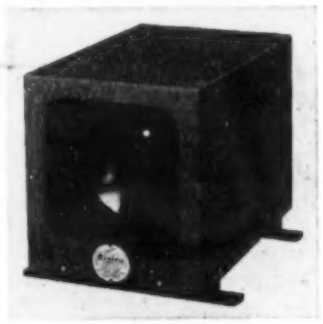
PLUGS & WALL PLATES



Tight connections for all electrical outlets in industrial shops and plants can be maintained by means of this Lok-Tite plug and wall plate unit. Once secured, plug cannot be pulled out until turned and released. This provides ample protection against accidental shut-down because of disconnection. Plug itself is fabricated of durable hard rubber, and projecting ears on plate engage plug and hold it firmly. For installation, Lok-Tite plate is placed directly over present plate. Made by **Lok-Tite Mfg. Co.,** 1050 Sherman St., Denver, Colo.

▲ Mention Item **NED-5059** when writing ▲

INDUSTRIAL BURGLAR ALARM



Utilizing modulated, invisible light beam, this industrial type burglar alarm provides hundreds of feet of protection with non-break-through feature. Receiver portion of alarm is tuned to modulated frequency of transmitter. Any change of frequency or reduction of light intensity causes alarm to sound. Unit is unaffected by bright sunlight, and lenses have micrometer adjustments in their mountings so that they can be accurately focused on phototube. Integral fan provides cooling for tubes and also acts as defroster in cold months. Unit is engineered to protect large outdoor areas, is weather-tight and rustproof. Made by **Ripley Co.,** 437 Factory St., Middletown, Conn.

▲ Mention Item **NED-5060** when writing ▲

Severance CHATTERLESS TOOLS HIGH SPEED CARBIDE

Winning their way on job after job, they are carefully designed to preclude chatter and can be depended on to produce superior finishes.

• • • • •

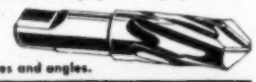
Severance CHATTERLESS COUNTERSINKS

STANDARD TYPE — Stocked in 13 diameters up to 2" and in 30°, 41°, 45°, and 60° angles (with C/L).

Sizes 1" and larger stocked also threaded for shanks — tapered or straight — in various sizes.

Use CARBIDE for tough jobs or high production.

HEAVY DUTY TYPE — Features larger shanks having a tang drive. Full range of sizes and angles.



HEADQUARTERS FOR COUNTERSINKS, REAMERS, SEATING TOOLS, and SPOTFACERS that preclude chatter.

Severance CHATTERLESS BALL SEAT REAMERS

Standard and Heavy Duty Types 8 sizes each. Made also for shaped cavities — as ordered.

BALL NOSE DRILLS — In corresponding sizes hog out the stock for Ball Seat Reamers.

Severance TAPER REAMERS

- Faster cutting
- Better finishing
- Shear-cut teeth

Tapers up to 15° quickly supplied from stock — up to 1½" diameter x 2¾" long.

Unexcelled for holes having keyways, ports, splines, cross holes, etc.

Write for Catalog 16

SEVERANCE TOOL INDUSTRIES, Inc.
761 Iowa Ave. Saginaw, Michigan

▲ Mention Item **NED-5061** when writing ▲

SHOOTING AIR

TORNADO

1⅓ HP PORTABLE ELECTRIC BLOWER

cleans safely interior of motors and other intricate machinery with a powerful **320 m.p.h. air stream** of pure, dry concentrated air from any electric outlet.

most powerful portable blower available. Acts instantly to sweep away all impurities and foreign matter—remove dirt, dust, lint and fuzz from bearings, gears, shafting and all moving equipment. Keeps mechanisms smooth-running—free from friction and heat.

Extra Feature. Simple suction attachments convert Blower into handy, portable vacuum cleaner swung from shoulder.

Also available in 1/3, 3/5 and 1 H.P.

WRITE FOR LITERATURE OR FREE DEMONSTRATION

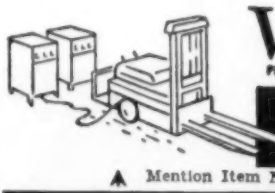
BREUER ELECTRIC MFG. CO.
5098 Ravenswood Avenue
CHICAGO 40, ILLINOIS

▲ Mention Item **NED-5062** when writing ▲

FULLY AUTOMATIC TRUCK BATTERY CHARGING...

GET THE COMPLETE STORY!

Plug it in, turn the time switch, and the Westinghouse Rectox Rectifier takes over completely. Easy to move—installs anywhere there is an a-c power outlet—no special foundations or wiring. High efficiency, low maintenance. Send for booklet B-3642, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh, Pennsylvania. J-21399



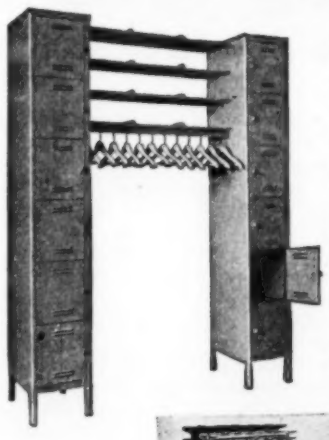
Westinghouse
PLANTS IN 25 CITIES ... OFFICES EVERYWHERE

RECTOX
COPPER-OXIDE RECTIFIERS

▲ Mention Item **NED-5063** when writing ▲

Checker COAT and HAT RACKS

END ALL "WRAPS" PROBLEMS



Checker Racks keep clothing "in press", aired on spaced hangers and hats on ventilated shelves. Save floor space — accommodate 4 persons per sq. ft. Fit in anywhere. Lifetime welded construction.

Where lockers are needed for lunches, tools, aprons, etc. use PETERSON Locker Racks, 5 ft. x 15 in. unit provides 12 persons with hangers, hat spaces and individual 12 in. x 12 in. x 15 in. lock boxes. These combination units are widely used to double capacity of or eliminate, locker rooms.

Write for Bulletin A-8

VOGEL-PETERSON CO.
"The Checkroom People"
624 South Michigan Ave. Chicago 5, U.S.A.

▲ Mention Item **NED-5064** when writing ▲

GE ANNOUNCES

NEW PORTABLE LEAK DETECTOR

$470

So sensitive it can detect a leak which would permit the escape of only 1/100 of an ounce of Freon in one year . . . yet the entire equipment—control and detector units weighs only 18 pounds.

Specially designed for locating leaks in refrigerators, home freezers, air conditioners, tanks, boilers, piping and other closed systems into which halogen compounds can be introduced as a tracer. *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

Write for bulletin GEC-233A

GENERAL ELECTRIC

▲ Mention Item NED-5067 when writing ▲

You know how tight with APCO TENSION DRIVER

$5.95

● HERE'S THE DRIVER you've been waiting for . . . a rugged, fool-proof, ratchet-free torque tool that'll save you many an hour on scores of different assembly jobs. Broken screw days are over when you use APCO.

Just check the safe load on the free chart supplied with every driver and go to work. Four big, easy-to-read brass dials let you see the exact torque from *any* position.

Every driver supplied with three fine tool steel heads to adapt the driver instantly to slotted, Phillips or ¼" socket drives.

Send for descriptive circular today . . . or better still, order one and see for yourself now the easy way this *new* APCO TENSION DRIVER saves you time, material and accidents.

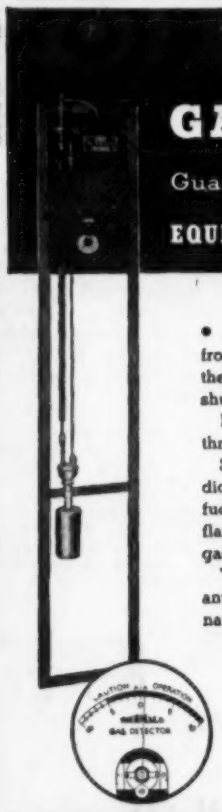
No. B-25. 0-25 inch pound. Length 12". Weight ¾-lb. Non-slip, non-chip, non-conductor handle.

APCO MOSSBERG CO.
Attleboro, Mass., U. S. A.

▲ Mention Item NED-5068 when writing ▲

BURNS THERMALO GAS DETECTOR

Guards Your GAS-FIRED PROCESSING EQUIPMENT . . . . . *day and night!*



• This new instrument detects unburned gas, from leaks or incomplete combustion—indicates the concentration—and operates an automatic gas shut-off well before the danger point is reached.

It operates during idle periods as well as through the combustion cycle . . . 24 hours a day.

So sensitive is the detector that its dial indicates even slight deviations from the correct fuel mixture. Equally effective for mixtures of flammable gases with inert gases—and for air-gas atmospheres.

The Thermalo Gas Detector is furnished for any specified type of gas fuel: manufactured, natural or bottled gas.

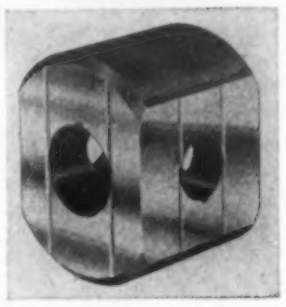
★ ELECTRICAL
★ NO GLOWING FILAMENTS
★ CONTINUOUS GAS SAMPLING

Write us your problem

JABEZ BURNS & SONS, INC., 563—11th Avenue, New York 18, N. Y.
Industrial Engineers Since 1864

▲ Mention Item NED-5069 when writing ▲

UNIVERSAL JOINT BLOCK



Two shallow grooves in each of four bearing surfaces of this Lo-Friction universal joint block reduce friction areas to minimum and cause even distribution of wear. In addition, grooves conduct oil to lubricate wearing surfaces and allow kinetic energy or frictional heat to be dissipated uniformly and rapidly. Grooves do not reduce breaking load in torque or tension. Blocks are available for use in joints from ¼ to 4 inches in outside diameter. Made by **Curtis Universal Joint Co.**, Dept. P, 9 Birnie Ave., Springfield 7, Mass.

▲ Mention Item NED-5070 when writing ▲

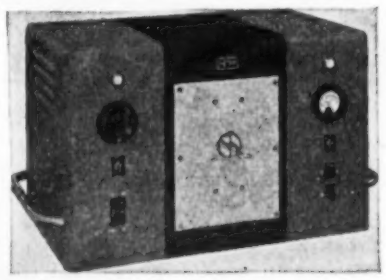
CHECK VALVE

Designed for use with liquids and gases, this check valve is fabricated of type 18, No. 303 stainless steel, and it operates on pressure drop of 16 pounds. It features large seat area, soft rubber washer with rounded edges and self-washing seat. Valve is small in size and will not leak at pressures as high as 50 pounds per square inch.

Types are available having ⅜-inch male pitch thread outlet and ⅜-inch 45-degree flare inlet, and with ⅜-inch male pipe thread and ½-inch, No. 14 National Pipe Thread flat flare inlet. Other sizes and threads from ¼-inch up are available on special order. Valves measure 2 inches overall in length. Made by **AMP Corp.**, 2921 Locust St., St. Louis, Mo.

▲ Mention Item NED-5071 when writing ▲

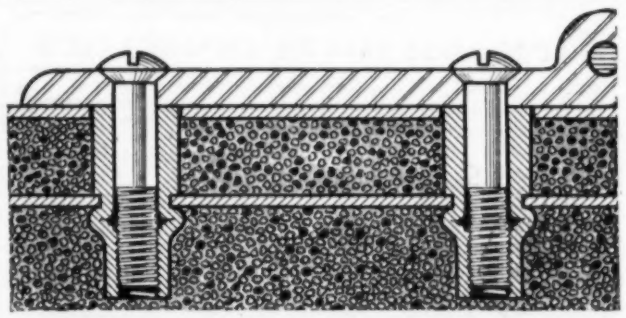
POWER GENERATOR



Designed for use in wide range of induction heating applications, this model HFH-1.2A-L electronic power generator has output of 1200 watts at frequency of 400 kilocycles. It is compact, provides for controlled heating and is designed with safety feature that automatically grounds all voltages when panels are removed for repair or inspection. Generator can be used for heating any metals whether they are magnetic or not. They are heated to desired temperature with single-turn work coil.

Cabinet is 30 inches wide, 18 inches deep, 19 inches high and has gray-blue wrinkle finish. Work coil connections are mounted on heat-resisting panel on front, and water cooling of coil is provided for high efficiency energy transfer. Power is generated by single-ended Colpitts oscillator. Made by **High Frequency Heating Co.**, 143 Glen Park, Gary, Ind.

▲ Mention Item NED-5072 when writing ▲



Simple answer to tough fastening problem . . . HINGES on RIVNUTS

Designs for a large, walk-in refrigerator required attachment of heavy hinges to the door which was constructed in "sandwich" form of steel sheets and hard sponge insulation material. B. F. Goodrich Rivnuts with thick spacer heads supplied the answer.

The spacer heads made it possible to upset the Rivnuts deep in the "sandwich" against the steel sheet. Clean threads remaining after upset supplied a firm foothold for hinge attachment screws.

Rivnuts may be the answer to *your* tough fastening problem. Why not get the facts from a Rivnut engineer? Write The B. F. Goodrich Company, Dept. NED-78, Akron, Ohio.

GET THE FACTS IN FREE RIVNUT DATA BOOK

Latest edition. Fully illustrated. 40 pages of facts on Rivnut installation, applications, types, sizes, load capacities. For your copy write to

B.F.Goodrich DEPT. NED-78, AKRON, OHIO

▲ Mention Item NED-5073 when writing ▲

HERE'S THE EASIEST WAY TO
• CUT HANDLING COSTS
• INCREASE PRODUCTION
• PREVENT ACCIDENTS

LO-HED ELECTRIC HOISTS AND CAR PULLERS

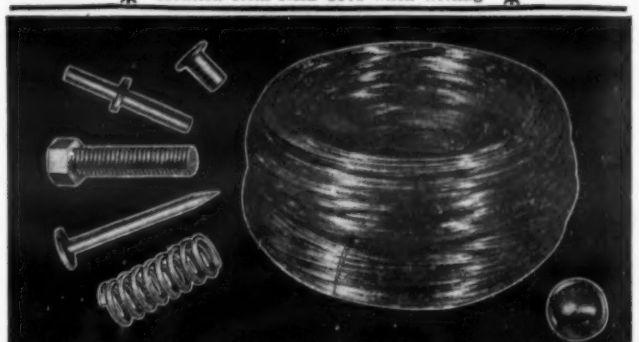
Slash your handling costs, boost production and prevent costly accidents by putting Lo-Hed Hoists and Car Pullers to work in your plant. Lo-Hed Hoists are built on the original low headroom principle, a plus feature you pay no premium for, in ¼ to 12 ton capacities. Lo-Heds are heavy-duty hoists, high in performance, low in maintenance—the hoists for handling materials overhead. Write for free Hoist and Car Puller Catalog.

Car Puller

Moving railroad cars, pulling skids, hauling products is a cinch with Æ Lo-Hed Car Pullers on the job.

LO-HED *Electric Hoists* AND CAR PULLERS
Products of American Engineering Company
Philadelphia 25, Pennsylvania
In Canada { Galbraith & Sulley Limited, Vancouver, B. C.
Affiliated Engineering Corporations Limited, Montreal and Toronto

▲ Mention Item NED-5074 when writing ▲



You're heading for lower costs with Ampcoloy 49 . . . the new cold heading rod and wire

. . . This new aluminum bronze alloy combines ductility for cold heading and high strength-weight ratio for economy

Ampcoloy 49 is alloyed specifically to provide the ductility that cold heading requires. Light in weight and strong, Ampcoloy 49 is further improved by working.

You can get Ampcoloy 49 as extruded solid rod in diameters up to 3", or in 100-pound coils of cold-heading wire, sizes from .125 to .420 gauge.

Use Ampcoloy 49 for economical cold-heading. Take advantage of its excellent spring characteristics, its corrosion resistance, and its weldability. It can be cold-coined, cold-forged—and annealed, if it is desirable to change its physical properties. For complete information on Ampcoloy 49, write for Bulletin 88 today.

AMPCO ®

Ampco Metal, Inc.
Dept. NE-7, Milwaukee 4, Wis.
Field Offices in Principal Cities

▲ Mention Item NED-5075 when writing ▲

Bryant Industrial
PIPE BURNERS

Write now for Data Sheet 1A-6

Made in more than fifty sizes, lengths and capacities for natural, manufactured, LP-Gas and mixed gases. Manual or spark-ignited pilots. Prompt delivery.

BRYANT HEATER CO. • INDUSTRIAL DIVISION
1020 LONDON RD. • CLEVELAND 10, OHIO
• ONE OF THE DRESSER INDUSTRIES •

▲ Mention Item NED-5076 when writing ▲

SCHOOL'S OUT!

Now's the time ... before school opens ... to make corridors, gyms and locker rooms *safe* for foot traffic. Bird Rubberlike Runner is non-skid, *wet or dry* ... and it lies flat without cementing. It won't buckle, and it's self-healing. Cuts and nicks are resealed by passing traffic ... there are no holes or humps to trip over.

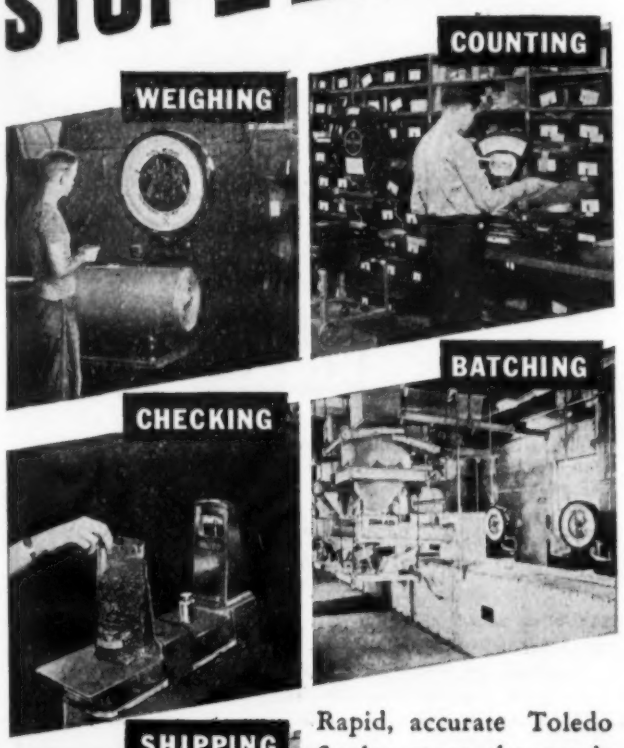
Rubberlike Runner costs less than 7c a square foot ... a patented thermoplastic that wears for years, keeps floors everywhere safe, neat and easy to clean. In rolls 27" x 100', 36" x 75'. Order from distributor or write for *free* sample ... Bird & Son, inc., 75 Mill Street, East Walpole, Massachusetts.

BIRD RUBBERLIKE® PATENTED NON-RUBBER CONSTRUCTION Runner BIRD NEWDUST PRODUCTS Established 1795

▲ Mention Item NED-5077 when writing ▲

Control Costs!

STOP ± ERRORS



Rapid, accurate Toledo Scales meet the needs in plants today where greater productivity PLUS *closer cost control* are essential!

Toledo Accuracy prevents small errors from multiplying into big losses and high costs. Toledos save time by making each weighing operation quick and sure. Let Toledo help you with your control jobs in weighing, checking, testing, counting, batching, force-measuring. Toledo Scale Company, Toledo 12, Ohio.

New illustrated bulletin No. 2020 shows Better Ways to control costs.

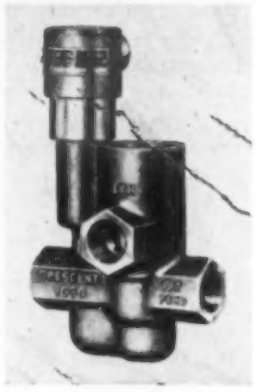
Send for this

TOLEDO

HEADQUARTERS FOR SCALES

▲ Mention Item NED-5078 when writing ▲

THREE-WAY CONTROL VALVE



Fast-acting pilot-actuated solenoid-controlled model No. 1030 three-way valve is designed for control of air, water and light oils at pressures from 25 to 140 pounds per square inch. It functions at any speed and is available for either normally-open or normally-closed operation. Sizes range from ¼ to 1¼ inches. Valve casings are cast bronze, and stainless steel balls are located between opposed, closely aligned bronze seats. Small screw-in type solenoids are supplied with valves for operation on any standard alternating or direct current voltage. Made by **Crescent Valve Co.**, 6073 State St., Huntington Park, Calif.

▲ Mention Item NED-5079 when writing ▲

VIBRATORY WORK FEEDER

Standard size cylindrical workpieces from 0.112 to 0.5-inch in diameter and up to 1 inch in length can be fed to centerless grinders and other types of automatic machines by means of this Landis model No. 1 vibrating type work loader. Workpieces must be straight, and ends can be slightly beveled or rounded except when length equals or is shorter than diameter. In this case, ends must be square. Feed rate is adjustable from creep to 75 or 90 inches per minute depending upon material. Mounting bracket is available. Adjustment is possible in all directions so that feed tube can be positioned properly. Unit operates on standard 110-volt alternating current and weighs 60 pounds. Made by **Landis Tool Co.**, Chestnut & Sixth St., Waynesboro, Pa.

▲ Mention Item NED-5080 when writing ▲

CONSTANT VOLTAGE BALLAST

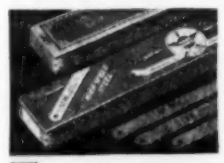
Designed to protect and stabilize operation of G-E type UA-4 mercury vapor lamp, type CVM-1 ballast transformer provides constant voltage regardless of line voltage variations. Lamp life is increased because over-voltage is prevented, and lamp outages resulting from voltage drops are eliminated. Constant spectral distribution of light output is maintained. Made by **Sola Electric Co.**, 4633 W. Sixteenth St., Chicago 50, Ill.

▲ Mention Item NED-5081 when writing ▲

STAR MAKES THE RIGHT BLADE FOR WHAT YOU CUT

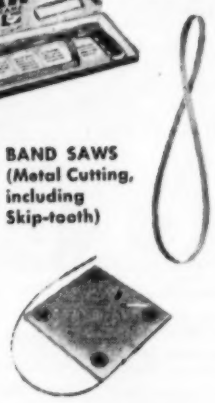
HAND BLADES

POWER BLADES



FRAMES

BAND SAWS (Metal Cutting, including Skip-tooth)



THE right blade for *every* job a hack saw or band saw can do—that's what your Star supplier offers. And Star has the *line* to back him up—a *complete* line.

Whether you cut metals or non-metallics—see your Star supplier. He has the blade for longer service, fewer blade replacements—faster, cleaner cutting on any material—the *right* blade for YOU. Ask him for your free copy of "Metal Cutting"—valuable booklet of hints, helps, specifications, prices.

Sold only through recognized distributors

CLEMSON

CLEMSON BROS., Inc., Middletown, N.Y.

▲ Mention Item NED-5082 when writing ▲

WHY TIE UP PRODUCTION?

IN JUST 60 SWIFT SECONDS AFTER SWIFT-FLOOR IS APPLIED TRAFFIC ROLLS!

• No need to halt production in your plant while floors are being repaired. Swift-Floor, the amazing plastic floor material, sets in just one minute and lasts for years! The more Swift-Floor is abused, the tougher it gets! Will repair or resurface your floors like new.

SO EASY TO USE
Any workman can apply Swift-Floor in 3 simple steps. Nothing to add or mix. Primer included with each 55-gallon drum.

UNCONDITIONALLY GUARANTEED
Try a 55-gallon drum. Use half of it or all. If not satisfied, return the drum for a full refund. Fair enough offer?

WRITE TODAY
Don't tolerate ugly, dangerous floors any longer. Especially when Swift-Floor can make them like new again, and for so little money! Why not write today for full details.

THE MONROE COMPANY, INC.
10705-E QUEBEC AVENUE CLEVELAND 6, OHIO

SWIFT-FLOOR THIS INSTANT FLOOR REPAIR SETS IN ONE MINUTE ...LASTS FOR YEARS

▲ Mention Item NED-5083 when writing ▲

There's no monkeying around with makeshift wire rope fasteners, on jobs where safety comes first. All over the world, big jobs and small jobs are rigged with genuine CROSBY CLIPS. They are steel, drop-forged, hot dip galvanized. Correct design makes a "vise-tight" grip. Complete run of sizes . . . for ⅛ to 3 inch wire rope. Distributors everywhere. Made only by AMERICAN HOIST & Derrick Co., St. Paul 1, Minnesota.

Industry uses more CROSBY CLIPS than all other drop-forged fasteners

8904

▲ Mention Item NED-5084 when writing ▲

You can HEAR HERE

—a zone of quiet for telephoning

Noisy factory offices may mean confused telephone conversations and the possibility of costly mistakes. Burgess "Scout" Model 601 Acousti-Booth solves this problem by providing a quiet place in which to hear, regardless of noisy surroundings. When you listen to the telephone inside this booth, you are protected by a "zone of quiet," provided by the Burgess acoustic construction. Model 601 Acousti-Booth and others, both wall type and full-length booths, shut out unwanted noise. Send today for free descriptive folder.

Full-length Acousti-Booths available of steel or plywood construction.

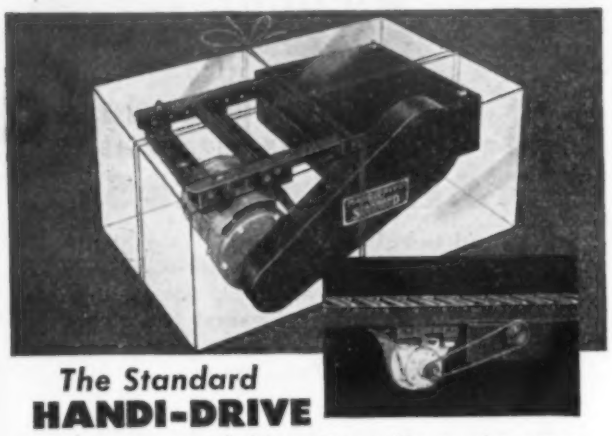
Write for FREE Bulletin!

Burgess-Manning Company
743-C East Park Avenue, Libertyville, Illinois
Please send illustrated booklet describing the Burgess Acousti-Booth.

NAME _____
FIRM NAME _____
STREEET-CITY _____

▲ Mention Item NED-5085 when writing ▲

New "Power-Package" Unit for Roller and Belt Conveyors



The Standard
HANDI-DRIVE

THIS self-contained drive unit provides tractive power for any gravity conveyor — belt or roller. Converts present conveyors to live roller or belt—quickly at low cost.

HANDI-DRIVE Bulletin No. NED-78 gives complete information — how to apply to present conveyors or plan new system with standardized units — straight, curves, or inclines. Write for copy today.

STANDARD CONVEYOR COMPANY, NORTH ST. PAUL 9, MINN.

SEND FOR HANDI-DRIVE BULLETIN.

Standard GRAVITY & POWER CONVEYORS

Mention Item NED-5086 when writing

REDUCE NOISE IN YOUR PLANT

WITH ISOMODE* PADS

They absorb vibration—cushion shock of impact

First thing you notice when you install Isomode Pads under machines is the noise reduction—and the disappearance of floor vibration. For machine operators, that means more comfort, less fatigue, better work. And with vibration and shock cushioned—your *machines* also stand up longer.

What makes an Isomode Pad so efficient? The rows of uniform Neoprene ribs, at right angles to each other. As a result, this 5/16"-thick pad absorbs both horizontal and vertical motions, relieves stresses in frame and floor. Get complete facts on easy-to-install Isomode Pads. Send for bulletin No. 405!

*Trade Mark Reg. U. S. Pat. Off.

THE MB MANUFACTURING COMPANY, INC.
1066 State St., New Haven 11, Conn.

VIBRATION DIVISION

Mention Item NED-5087 when writing

ATTENTION ENGINEERS LAB TECHNICIANS INSPECTORS

A "LAB" MAN'S DREAM

Carry this New Design "PEN" MICROSCOPE in your vest pocket for quick inspection

In leather case **$18.50**

Satisfaction guaranteed or money back in 5 days. Send check or money order or write for free illustrated folder.

Check these BIG FEATURES:

- Quick adjustment gives you 40, 50, or 60 power, self-illuminating magnification
- Perfect for examining minute detail in plant, office, lab, home
- Beautiful satin nickel finish
- Equivalent of standard lab microscope, yet no longer than a fountain pen.

E. W. PIKE & CO. (NED 7-48)
492 North Ave.
Elizabeth 3, N. J.

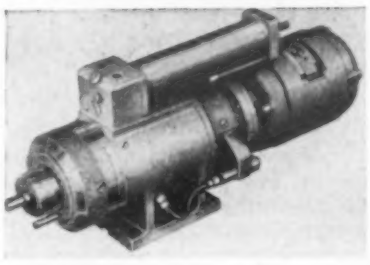
☐ Please send me_____"Pen" Microscopes for which I enclose my (check, money order) for_____

☐ Please send me free illustrated folder.

Name_____ Title_____
Company_____
Street_____
City_____ State_____

Mention Item NED-5088 when writing

PRODUCTION POWER UNIT



Production drilling as well as milling, riveting, chamfering, saw slotting and spot facing can be performed in any position, angle or plane by this air-hydraulically actuated power unit which incorporates electric motor driven spindle. Head can be used individually or combined with others for multiple spindle machining operations. Capacity of model 250 is up to ¼-inch hole in steel, and model 500 will drill up to ½-inch hole.

Both models feature rapid approach and variable feed. Tool approaches rapidly to within 0.001-inch of work surface, and then normal machining feed takes over automatically. Micrometer adjustment and lock screw accurately control depth of drilling, countersinking or chamfering.

Motor and feed mechanism are totally enclosed to exclude dirt, chips or coolant. Unit's four working parts operate in bath of oil. Ample bearing support to spindle holds runouts to 0.0005-inch. Control can be manual, foot, semiautomatic or fully automatic. These power units can be attached to machine tools or equipment by brackets, and they can also be supplied incorporated in special machines for production operations. Made by **Cleveland Republic Tool Corp.**, 1265 Union Commerce Bldg., Cleveland 14, O.

Mention Item NED-5089 when writing

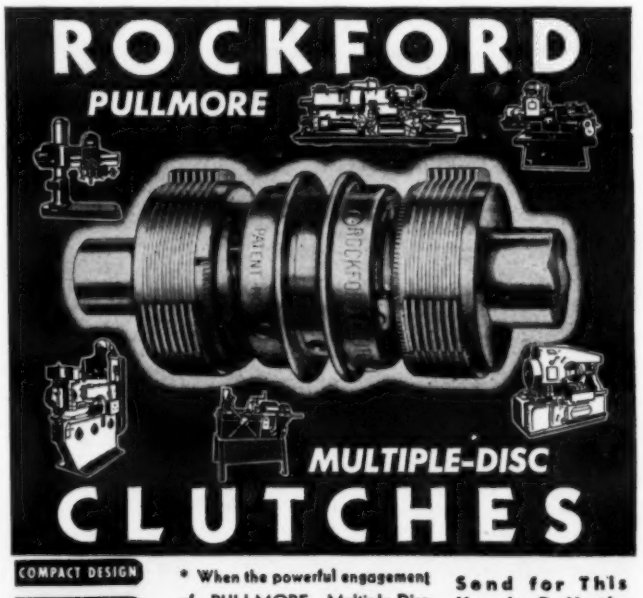
HEAT TREATING FURNACE

Providing positive controlled heat for treatment of such products as sheet metal, tubular shapes, bar stock, shafts, bearing race stock, gears, screw blanks and machine parts, this Lithium atmosphere pit type furnace is designed for heating operations at temperatures up to 2000 F. Unit automatically controls conditions for carburizing, carbon restoration, annealing, neutral hardening, cycle annealing, normalizing and descaling jobs. Process control is accurate enough to replace carbon in surface of decarburized steel within five points of base carbon of parts being treated.

Lithium vapor, with standard carrier gas, is introduced into furnace to fill work chamber, and it provides protection and control at the work. Cylindrical furnace shell is of welded construction, is completely gas-tight and is lined with insulating refractory brick. Furnace is also equipped with alloy retort into which work can be placed. Arrangement can be made either to suspend work vertically from fixture or to load it in baskets. Wide swing type furnace cover is hydraulically raised and lowered. Furnaces are available in fourteen standard muffle sizes with work areas ranging from 20 inches in diameter x 20 inches deep to 36 inches in diameter x 60 inches deep. Made by **Lithium Co.**, 111 Sylvan Ave., Newark 4, N. J.

Mention Item NED-5090 when writing

ROCKFORD PULLMORE MULTIPLE-DISC CLUTCHES



COMPACT DESIGN
HIGH TORQUE
HIGH-RATIO LEVERS
POSITIVE NEUTRAL *
PRECISION BUILT
LONG WEAR LIFE
EASY ADJUSTMENT

* When the powerful engagement of PULLMORE Multiple-Disc CLUTCHES is released, declutching is instant and positive. The perfectly flat, floating discs separate and ride free — without drag, heat or abrasion. This positive neutral is especially valuable in rapid-operating, multiple-cycle machines.

Send for This Handy Bulletin

Shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS. Contains diagrams of unique applications. Furnishes capacity tables, dimensions and complete specifications.

BW

ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

Mention Item NED-5091 when writing

"1001" Styles of Industrial Gloves to Save Workers' Hands

Suit the glove to the job . . . to cut your costs, step up production

This plain canvas glove (No. 1800) is "Olymized", a process which makes gloves so treated outlast ordinary untreated gloves by as many times as 3 to 1 or 9 to 1, depending on the job. Will not peel or crack, non-slippery, non-toxic. Washable; retains its softness and flexibility. Also made with long and short cuffs. Remember . . . there's an Olympic glove for every job!

FREE *Send for Illustrated Catalog of Safety Work Gloves, Finger Protectors and Safety Apparel*

OLYMPIC GLOVE COMPANY INC.
95 MADISON AVE., DEPT. 10 NEW YORK 16, N. Y.

Mention Item NED-5092 when writing

Completely Different

NEW SELF-CONTAINED DUST-CONTROL UNIT . .

Built By
KIRK AND BLUM

The new Kirk and Blum Self-Contained Dust Control Unit is designed to collect injurious dust, returning clean air to the room. It can be set up anywhere to serve any machine for any period of time. Not a cheap fractional HP unit designed to a price . . . but designed to do a fine job of dust collecting, powered by a 3 HP motor. Has an air volume of 900 CFM at 2" suction with capacity for four 3", two 4" or one 6" pipe connection.

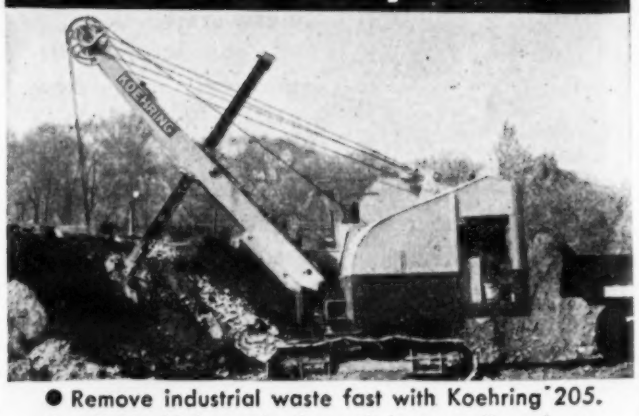
Made by Kirk and Blum, experts in dust control for over 40 years.

THE KIRK & BLUM MFG. CO.
2813 Spring Grove Ave.
Cincinnati 25, Ohio

FOR CLEAN AIR . . . THE INVISIBLE TOOL
KIRK AND BLUM
DUST CONTROL SYSTEMS

Mention Item NED-5093 when writing

Speed Up Industrial Waste Disposal



● Remove industrial waste fast with Koehring 205. A reliable high production unit in a small package, the Koehring 205 is the ideal excavator for the industrial plant. Half-yard shovel capacity: 13,800 lbs. lifting capacity (75% rating). Easily convertible from shovel to lift crane, pull shovel, or dragline. Contact your Koehring distributor today.

778

KOEHRING 205
KOEHRING COMPANY, Milwaukee 10, Wis.

Mention Item NED-5094 when writing

LYON-Raymond New SINGLE-STROKE LIFT TRUCK

• 2500 lb. CAPACITY •

- Single frame construction, saving weight without sacrificing strength. Gives over twice the under-clearance of any double frame lift trucks.
- Operates in confined spaces; handle can be manipulated at any point within 90° right or left of center.
- Elevating mechanism completely enclosed — mechanism protected; injury to workers eliminated.
- Push button action engages lifting device. Positive lock holds load in elevated position.
- Built-in hydraulic release check lowers load gently — safely.
- Safety lock prevents handle from flying back when partially lowered during lifting operation.

LIGHTWEIGHT STURDY—SAFE

SIMPLE Easy to Operate

- This notably different Lyon-Raymond lift truck is a worthy addition — on its own particular merits — to a well-established line of Lyon-Raymond hydraulically operated lift and pallet trucks.

LYON-Raymond Corporation
706 Madison St., Greene, N. Y.
Material Handling Equipment—Engineered Hydraulic Devices

▲ Mention Item NED-5095 when writing ▲

SPINNING Costs GO DOWN WITH THE SPIN MASTER

Type R-3, 3 h.p., LIMA multi-speed GEARSHIFT DRIVE.

28 years of experience in engineering to meet the demand for superior Spinning Lathes, is incorporated in the Spin Master, manufactured by Haag Machine Co., Hawthorne, N. J.

POWER COSTS GO DOWN with LIMA Gearshift Drives

Lima Gearshift Drives, originally introduced to modernize obsolete machines, have won nationwide acceptance by Original Equipment Manufacturers, as integral parts of their products. Lima's dependable, low-cost reputation is the result of close cooperation between Lima Engineers and Users of Lima Drives. Write for Bulletin.

THE LIMA ELECTRIC MOTOR CO.
383 Findlay Road
LIMA, OHIO
REPRESENTATION IN MOST PRINCIPAL CITIES
LIMA GEARSHIFT DRIVES
LIMA PEDESTAL GRINDERS — LIMA ELECTRIC MOTORS

▲ Mention Item NED-5096 when writing ▲

STOP INEFFICIENT PRODUCTION

by using STICHT Tachometers, portable or stationary types

DON'T GUESS

We have in stock for immediate shipment the greatest assortment of tachometers in America. Write for condensed Tachometer Bulletin No. 1046.

CHECK RPM AND RATE OF PRODUCTION

Such as FPM, YPM, Sheets per minute, Minutes Baking Time, Impressions per Hour, or others

CONSTANTLY

by mounting STICHT Stationary Tachometers on your machines. 4", 5½", 8", 10" and 20" dials. Bulletins Nos. 795, 796, 797 and 798

HERMAN H. STICHT CO., INC.
27 PARK PLACE NEW YORK 7, N. Y.

▲ Mention Item NED-5097 when writing ▲

COOLANT PURIFICATION UNIT

Seven sizes of this automatic coolant clarification unit are available for attachment to grinders, broaches, boring machines, milling machines, rolling mills and other metalworking tools where abrasives as fine as 5 to 10 microns must be filtered from water soluble coolant. Liquid is filtered under pressure through 250 and 496-mesh Monel 'Dutch' weave screens. Models with single-tube have flow rate of from 5 to 15 gallons per minute, and largest models having 37 tubes have flow rate of from 1000 to 1200 gallons per minute. Automatic blow-down requires approximately 5 seconds and is cycled at any predetermined period by means of an electric timer. Made by **Honan-Crane Corp.**, 668 Wabash Ave., Lebanon, Ind.

▲ Mention Item NED-5098 when writing ▲

SAFETY PRESS TONGS

Constructed of magnesium, these safety tongs are 12 inches long and weigh only 6 ounces. Lightness in weight affords maximum ease in handling parts or blanks into punch presses or shears. In addition to standard type shown, tongs can be produced in any type or size desired, either in as-cast form or completely assembled. They cannot damage dies. Made by **Hills-McCanna Co.**, Foundry Div., 3025 N. Western Ave., Chicago 18, Ill.

▲ Mention Item NED-5099 when writing ▲

FIN TYPE HEATING ELEMENT

Designed to heat air in motion, this Fin Heatube electric heating element has been extruded from tube itself to assure maximum heat transfer. One-foot section radiates as much heat as 9 feet of plain tubular material. It can be furnished in lengths to meet individual specifications in wattages up to 3000, for operation on 115 and 230-volt current and in tube diameters of 1 or 1¼ inches. Tubing can be bent to desired shape without jigs. Copper and aluminum units are available in which elements are replaceable when installation is made without bending. Because hot filaments are not exposed, units are recommended for use in portable circulating heaters, drying ovens and similar installations. Copper units can be used also as immersion heaters. Made by **Industrial Electric Mfg. Co.**, 127 Hubbard St., Allegan, Mich.

▲ Mention Item NED-5100 when writing ▲

You get MORE speed and accuracy

WITH THE JOHNSON METAL CUT-OFF BAND SAW

YOU GET MORE SPEED with this inexpensive Johnson because of its greater stability, the exceptional rigidity of its three-point-supported, heavy bed, and equally vital, the vibrationless stiffness with which the saw is held to the work by its wide supporting guide rolls. All this simply means that the saw blade can be pushed harder, will last longer, and will cut more accurately and closer to tolerance, which in turn means a further saving in material and machining time.

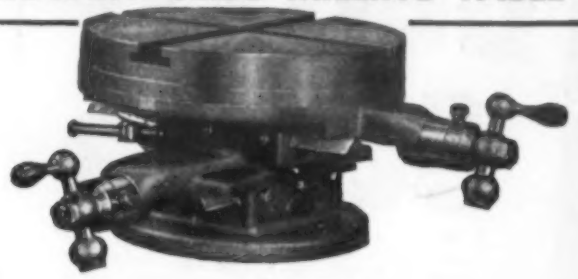
- Big capacity—10" x 18" —all you need.
- Four motor speeds. Automatic shut-off at the end of cut.
- Automatic, hydraulic feed.
- Wet cutting model (illustrated) and dry cutting type available.

Write for catalog and address of dealer nearest you.

JOHNSON MANUFACTURING CORP.
621 CHRYSLER BLDG., NEW YORK 17, N. Y.

▲ Mention Item NED-5101 when writing ▲

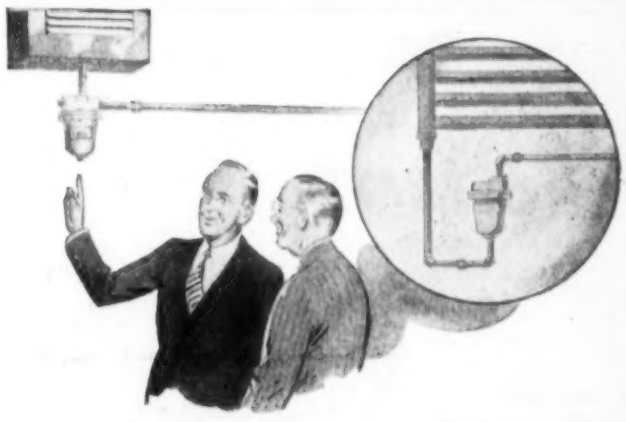
MASTERCRAFT ROTARY SLIDE MILLING TABLE



On the lathe face plate, miller table, or drill press are countless jobs more easily and quickly performed with a MASTERCRAFT Rotary Slide Milling Table. Drilling guesswork with the use of dividers, scale or centerpunch for the precision spacing of holes is eliminated by the micrometer dials. Clamped to the lathe face plate, the table with its compound slides permits work to be set over for precision boring and turning. As a miller auxiliary, it is valuable for jobs requiring rotary movement of the work table for angular indexing. Now manufactured in Series 500, 600, 700, and 800 to cover a wide range of service for all industry, including the hobbyist and the home work shop. Available for immediate shipment.

F & M Sales Co.
1054 Cahuenga Boulevard, Hollywood 38, Calif.

▲ Mention Item NED-5102 when writing ▲



But NOW we simplify with SUPER-SILVERTOPS

"Habits are hard to break, but we finally stopped our *confusion-piping* habit and now we simplify all our steam trap piping by using Anderson Super-Silvertops. We save as many as 9 fittings and 60 minutes of installation time per trap this way. Do you wonder that we made the change?"

Long life, easy to inspect, high capacity, no parts problem, no flopping bucket are other reasons for Super-Silvertop popularity. Get the whole story now—send for your copy of the book, "How To Choose A Steam Trap." Contains helpful hints, tables, charts; sent free on request. Write.

THE V. D. ANDERSON COMPANY
1932 West 96th Street • • Cleveland 2, Ohio

▲ Mention Item NED-5103 when writing ▲

Revolutionary NEW WAY to Control DRILLING SPEEDS

New Instant SPEED CHANGER with QUADRILL— 4-position Drill Head

NOW—a quick, positive way to insure correct, efficient drilling and tapping speeds. Instant SPEED CHANGER, with just a touch of a lever, gives you slow speeds for tapping and a change of speeds for large and small drills—the proper speed for the job. Eliminates cumbersome and often unused belt changes. . . . QUADRILL, the 4-position drilling and tapping turret head for all drill presses, provides 4 operations on 1 spindle. Speeds operations. Cuts production costs.

SPEED CHANGER and QUADRILL sold as unit or separately. Specify size and make press and motor shaft diameter.

Write for literature and prices

CHICAGO DRILLET CORPORATION
1755 N. Winchester Ave., Chicago 22, Illinois

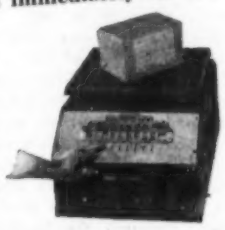
▲ Mention Item NED-5104 when writing ▲

DETECTO SCALES

There's a precision-accurate Detecto Scale for your specific weighing and counting need. The Detecto helps increase production, yet assures you maximum accuracy by making slightest weight discrepancies immediately visible.

DETECTO POST-O-METER

Another Detecto Scale that protects your profits. With the Detecto Post-O-Meter, you just press a key and get one precise to-the-penny magnified figure. Thermolastic spring compensates for temperature changes.



Write for Catalogue

DETECTO · SCALES · INC.
MAKERS OF FINE SCALES SINCE 1900
507 MAIN STREET • BROOKLYN 1, N. Y.
SCALE ENGINEERS—IN ALL PRINCIPAL CITIES

▲ Mention Item NED-5106 when writing ▲

EXPAND YOUR HOT WATER SUPPLY *Economically*

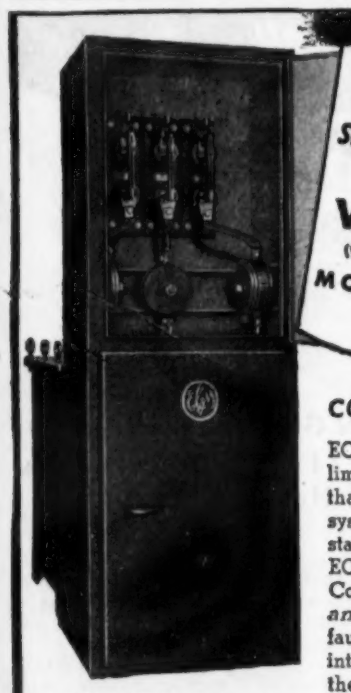
- NO TANK!
- NO EXCAVATING!
- NO COMPLICATED PIPING!

● *The Economy* as well as the efficiency of General Instantaneous Water Heaters is an important reason why so many are now in service. Economical to install. Economical to operate and maintain. Economical in space. Easily tapped into pipe lines at strategic spots, or as boosters on storage tank systems.

These General Water Heaters for Plant washrooms or Industrial processes are available in 12 sizes—capacities, 6 to 270 gallons per minute. Supply piping-hot water through seamless copper tubing. Write for Catalog 17. General Fittings Co., Dept. I, 123 Georgia Avenue, Providence 5, Rhode Island.

GENERAL
TANKLESS AND INDIRECT WATER HEATERS AND HEATING SPECIALTIES

▲ Mention Item NED-5107 when writing ▲



STOP Short Circuit Damage with EC&M **VALIMITOR** (VOLT-AMPERE-LIMITOR) MOTOR STARTERS

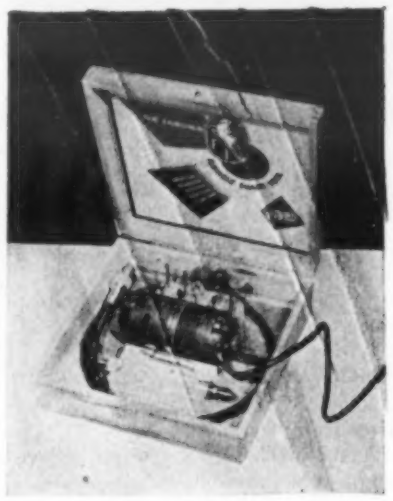
COMPLETE PROTECTION

EC&M VALIMITOR Starters limit the maximum fault current that can be obtained on *any* system to 25,000 KVA (steady state current). The well-known EC&M Type ZHS Magnetic Contactor-starter has more than *ample capacity* to clear faults of this magnitude. The interrupting capacity rating of the ZHS Starter is, in fact, 50,000 KVA, and under a maximum fault condition, the electromagnetic forces set up in the starter will be only *one-fourth* of this rating. All apparatus on the system back to the power source (including generators) is likewise subject to reduced stresses.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79th STREET • CLEVELAND 4, OHIO

▲ Mention Item NED-5108 when writing ▲

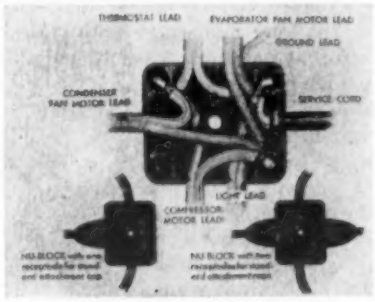
PORTABLE POWER TOOL



Furnished complete with ten selected accessories, this portable model F-2 flexible shaft power tool operates at up to 15,000 revolutions per minute. It is powered by 1/20-horsepower universal type motor and is equipped with plastic-covered 3-foot flexible shaft. Pencil-size handpiece takes either 3/32 or 1/8-inch shank tools. Motor is dynamically balanced to assure smooth operation. Tool has attractive, hard-baked enamel finish and is designed for production work in engraving, buffing, routing, polishing and numerous other operations. Made by **Fairchild Industries,** 110 Main St., Burlington, Vt.

▲ Mention Item NED-5109 when writing ▲

ELECTRICAL JUNCTION BLOCK



Applicable for use in wiring portable refrigeration equipment, this Nu-Blok electrical junction block eliminates danger of short circuits caused by faulty soldering or stray strands of wire. It is fabricated of thermosetting phenolic compound and isolates splice connections in circular cells at each corner of block. Soldered or fastened with brass clamps, splices are immobilized by inserting bared conductors in narrow slots which are smaller than diameters of splices. Block assembly is then riveted together through center with eyelet that provides channel for quick-attachment to mounting base.

Junction block conforms with Underwriters' Laboratories dimensional, dielectrical and heat resistant standards. Illustration shows refrigeration adaptation where thirteen rubber-covered 18-gage stranded conductors are accommodated in one assembly. Six outlets provide large capacity, and unused outlets can be sealed. Made by **United Mfg. & Service Co.,** 783 N. Water St., Milwaukee, Wis.

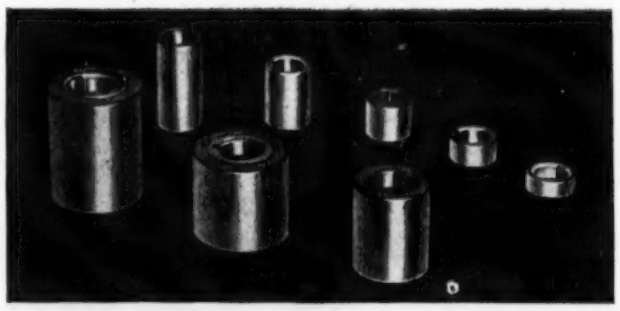
▲ Mention Item NED-5110 when writing ▲

DO YOU KNOW?

■ COMPLETE details regarding the Planned Lighting $1500 Merit Award Competition as well as an official entry blank are included in the official rules booklet offered to engineers, designers, owners and users of industrial and commercial lighting. Write to Merit Award Committee, Third International Lighting Exposition, 326 W. Madison St., Chicago 6, Ill.

▲ Mention Item NED-5111 when writing ▲

ARBOR BEARINGS and COLLARS
For Standard Style A and Style B Arbors



FOR IMMEDIATE SHIPMENT
ARBOR BEARINGS

Kearney & Trecker Arbor Support Bearings are available for all standard style A and style B milling machine arbors, in both outer support and intermediate support bearing lengths.

ARBOR COLLARS

Kearney & Trecker Arbor Collars are available for all standard style A and style B milling machine arbors, in lengths of 1/4"-5/16"-3/8"-1/2"-3/4"-1"-1¼"-1½"-2" and 3".

For complete information on arbors, cutters, and other standard milling machine accessories and attachments write for catalog C-10C.

KEARNEY & TRECKER CORPORATION
6743 West National Avenue • Milwaukee 14, Wisconsin

▲ Mention Item NED-5112 when writing ▲

Is Adaptable . . . Easy to Design into a Product

THESE AND OTHER CUT PARTS CAN BE MADE FROM S.A.E.-SPECIFIED FELTERS FELTS

Gaskets	Lubrication Seals
Spacers	Plugs
Dust Seals	Discs
Bumpers	Filters
Wicking	Packing Rings
Oil Seals	Washers
Bushings	Window Setting
Liners	Grease Retainers

Hundreds of the biggest names in U. S. industry specify *FELTERS* cut parts because . . .

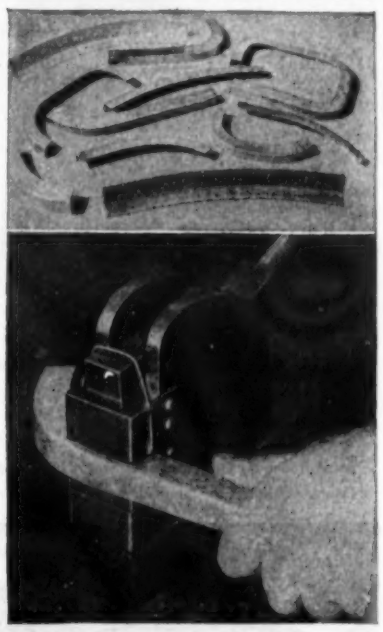
1. No order is too large for us to handle.
2. No order is too small to earn our painstaking attention.
3. No order is too complicated for Felters engineering and production accuracy.
4. Felters manufacturing and distributing facilities enable promptest delivery on even the most urgent orders.

Write for details. Ask for your free copy of the Felters Precision Cut Felt Parts Manual — and use it to save precious minutes every time you order cut felt parts.

The FELTERS COMPANY
210-C SOUTH STREET, BOSTON 11, MASSACHUSETTS

▲ Mention Item NED-5113 when writing ▲

HOW YOU CAN *Save Hours* FORMING METAL ANGLES



METAL shrinking or stretching that formerly took hours is now done in minutes with the C-B Manual Metal Shrinker or Stretcher. They handle sheet metals up to 16-gauge. No adjustment. Forms to radius as small as 3". Use these C-B tools on bench, stand or in a vise. Ideal for making machine guards. Compact and portable. Reversible, hardened steel jaws for double service life. *Write for free illustrated bulletin.*

C-B TOOL CO.
Lancaster, Pa.
Canadian Distributor
J. C. Adams Co., Ltd., Toronto

SHRINKERS & STRETCHERS

▲ Mention Item NED-5114 when writing ▲

There's a Bag Full of Savings
IN USING
GENERAL PLATE
Laminated
SILVER CONTACTS

The outstanding advantage of using General Plate Laminated Silver Contacts is that they give you solid silver performance at a fraction of the cost of solid silver. How—because these contacts give you a silver contact face at the *actual point of contact* where the precious metal performance is desired.

Overcome the high cost of silver by using General Plate Laminated Contacts and Metals. They'll save you many dollars and increase the performance of your products. Write for information and engineering assistance.

GENERAL PLATE DIVISION
of Metals and Controls Corporation
807 FOREST STREET, ATTLEBORO, MASS.

▲ Mention Item NED-5115 when writing ▲

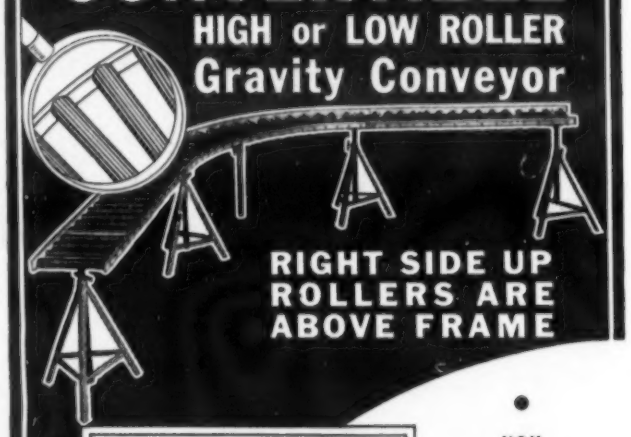
"COMMERCIAL" TANK HEADS

WRITE FOR CATALOG

THE COMMERCIAL SHEARING AND STAMPING COMPANY
1775 LOGAN AVE. YOUNGSTOWN 1, OHIO

▲ Mention Item NED-5116 when writing ▲

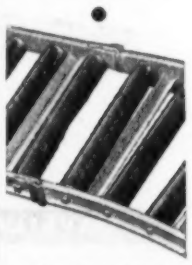
CONVERTIBLE
HIGH or LOW ROLLER
Gravity Conveyor



RIGHT SIDE UP ROLLERS ARE ABOVE FRAME

METZGAR 2 in 1 Portable Gravity CONVEYOR

YOU CAN'T BEAT METZGAR CONSTRUCTION



Coupling Hook "Ears" outside of frame permits free flow of work.

LIGHT-PORTABLE

The Metzgar dual-purpose conveyor is built with the free running rollers well below the sides of the units so the sides form a continuous guide that prevents small packages from falling from the conveyor. Then--simply turn the units over, and you have a perfect "full floating" conveyor with the rollers well above the edges of the frame ready to handle material that is wider than the conveyor frame.

Exclusive labyrinth ball race retaining original lubricant, keeps out dust or water.

Quickly adjusted tripod support.

Galvanized Rollers and Aluminum Wheel Bearings provide Rust-Resisting Construction

Oversized bolts, vibration proof.

BOTTOM SIDE UP FRAME FORMS GUARD RAILS

Write for Detailed Information

METZGAR CO.
416 DOUGLAS ST., GRAND RAPIDS 4, MICH.

▲ Mention Item NED-5117 when writing ▲

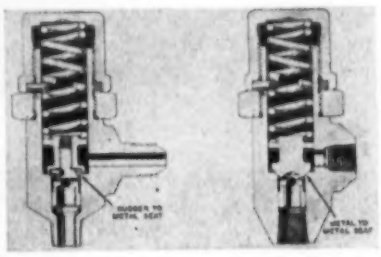
CARBIDE-TIPPED PUNCH

Incorporating Carboloy cemented carbide tip, model C-20 automatic center punch can be used for routine marking of glass, hardened steels and other materials which usually dull punches quickly. It is reported that up to 1000 holes can be punched in steel of Rockwell C-60 hardness before point need be sharpened.

Only 4 inches long, tool can mark materials in relatively inaccessible places. It contains spring actuated hammer which is tripped by pressure on punch. Pressure of spring can be adjusted between 8 and 20 pounds. By adjusting blow, glass and light gage metals can be center punched for subsequent operations without shattering or distorting. Wide variety of points can be attached to punch. Made by **Vinco Products,** 326 Bond St., Asbury Park, N. J.

▲ Mention Item NED-5118 when writing ▲

AIR-OIL RELIEF VALVE



Pressures ranging from 0 to 450 pounds per square inch can be handled by five different types in this series of hydraulic and pneumatic relief valves which includes six basic sizes from ¼ to ¾-inch. Sizes 1-inch and larger as well as pressure ranges up to 1000 pounds per square inch can be supplied on special order. Connection arrangements involving male and female combinations of pipe thread and tubing fittings are available.

Adjustment to any operating pressure within range is effected by positioning threaded cap which determines spring pressure on shut-off piston. Guiding of this piston assures fast unloading and smooth, silent operation. In model for hydraulic application, piston makes metal-to-metal seal with body. In style for air and gas service, valve is provided with O-ring rubber-to-metal seal. Piston is formed to enclose all of synthetic rubber ring except portion which actually seats.

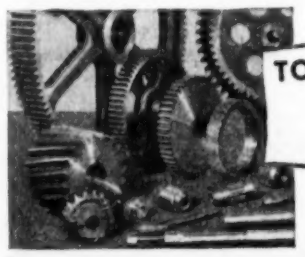
Body and cap elements are aluminum or brass, while springs and metal-seat pistons are stainless steel. Arrow marked on valve body indicates direction of relief flow. Made by **Parker Appliance Co.,** 17325 Euclid Ave., Cleveland 12, O.

▲ Mention Item NED-5119 when writing ▲

DO YOU KNOW?

■ SECURELY packaged between plain or colored cellulose or paper tapes, precision-made Holtite screws of any size and practically any number can be supplied. This packaging method facilitates inclusion of correct types and quantities of screws with 'knock-down' assemblies. Taped screws with slotted or Phillips heads can be supplied also in continuous strips on spools. Tape can be color-coded, imprinted with trademark or otherwise identified. Service offered by Continental Screw Co., 485 Mt. Pleasant, New Bedford, Mass.

▲ Mention Item NED-5120 when writing ▲



TO MEET YOUR EVERY GEAR REQUIREMENT

WE HAVE THE PLANT CAPACITY—

WE HAVE THE "KNOW-HOW"—

WE HAVE THE EQUIPMENT—

WE HAVE THE SKILLED CRAFTSMEN

"Industrial" CUT GEARS SPROCKETS RACKS

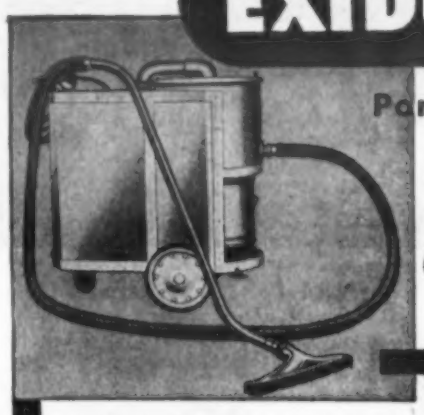
We're fully tooled for cutting Spur, Bevel, Mitre, Worm, Internal, Spiral, Angular and Helical Gears including Splines, Machine Racks, Roller and Silent Chain Sprockets. At "Industrial" your specifications are followed to the letter. Careful checking—on time delivery are on our time-table.

Make it a Habit to Send Us Your Gear Orders

INDUSTRIAL GEAR MFG. CO.
4541 VAN BUREN STREET CHICAGO 24, ILLINOIS

▲ Mention Item NED-5121 when writing ▲

EXIDUST



Portable... Powerful VACUUM Cleaning UNIT

● as easy to use as a home vacuum cleaner—EXIDUST has suction so powerful it even picks up nuts and bolts. This compact giant of a cleaner grabs every trace of sand, filings, dust—all forms of dirt and foreign matter. Use it for "dry scouring" of floors, walls, pipes, machinery, furniture... anywhere in the plant, shop, or institution. Dust-proof receptacle cleans the air—extracts all dust—is easy to empty.

If you have cleaning problems, get full information on EXIDUST... portable or stationary vacuum system. For bulletin on both types, write:

ALLEN-BILLMYRE DIVISION
LAMSON CORPORATION
503 Lamson St., Syracuse 1, N. Y.

▲ Mention Item NED-5122 when writing ▲

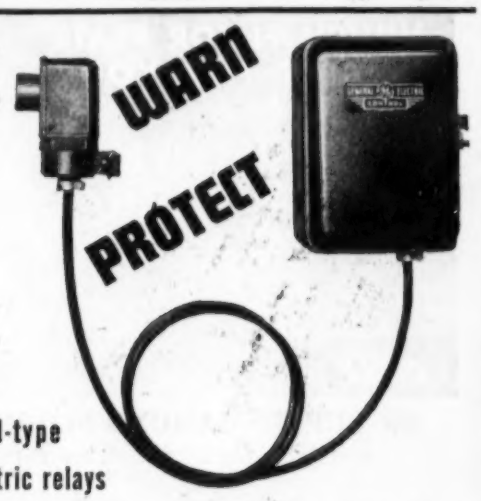
HOW SAFE ARE *Your* Ground Connections?

Know the condition of all your man-made grounds through the periodic use of a "Megger"* Ground Tester. Available in two models, the "Megger" Ground Tester has its own hand generator; requires no batteries or other external power supply • Is direct-reading in ohms—"like a voltmeter" • Requires no calculations, adjustments or "balancing" • Needs only one set of connections • Is unaffected by the exact resistance of the reference grounds • Is unaffected by stray current in the earth either a-c or d-c, or by polarization or electrolysis • Is self-contained, rugged and portable • Represents only a small fraction of the cost of adequate grounding protection. Send for Catalog 25-D.

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ Mention Item NED-5123 when writing ▲

LIMIT WARN PROTECT



with G-E industrial-type photoelectric relays

Guard personnel, property, and production with a light beam. Any object, no matter how delicate—even a drift of smoke—will operate these relays. Operate up to 300 times a minute.

If space is limited, relays can be remotely located and mounted on metal panels.

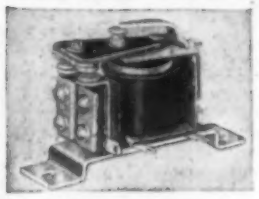
A variety of accessories for special mountings—indoor or outdoor—and infrared filter cap for invisible light are available.

More information at your nearest G-E office. Write for Bulletin GEA-5034. *Apparatus Dept. General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

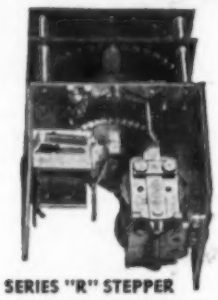
▲ Mention Item NED-5124 when writing ▲

of ELECTRO-MAGNETIC CONTROL



SERIES 220 RELAY

This small relay is capable of handling 20 amps at 220 v., the leader in its size and price field for inexpensive, compact, heavy current control. A very widely used small relay for industrial control such as welding machines, x-ray, motor starters, etc.



SERIES "R" STEPPER

Used for cycle control requiring continuous sequence repetitive operations; to remotely select and control multiple circuits; can be furnished to rotate continuously, reset automatically or to pulse both clockwise and counter clockwise on the same unit with up to 100 contacts on a disc.

Write—tell us your control problem. Get specific recommendations.

GUARDIAN ELECTRIC
1626H W. WALNUT STREET CHICAGO 12, ILLINOIS
COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY
Mention Item NED-5125 when writing

STAINLESS STEEL *Solenoid Valves* ★

★ Standard pressure range, 5 to 250 psi
★ Dimensions 2¾" high x 1⅝" dia.
★ Impregnated coils withstand moisture and condensation
★ Soft insert seats prevent leakage
★ Spring loaded for positive action
★ Stainless steel parts highly resistant to corrosion and wear
★ Power consumption 10 watts max.
★ Pipe connections to specification
★ Also many special valves for handling pressures from 5 to 850 psi

THREE WAY - TWO POSITION
TWO WAY - NORMALLY CLOSED
TWO WAY - NORMALLY OPEN

Skinner Stainless Steel Solenoid Valves are rugged, accurate, compact and long lived. They are worthy additions to any product you may have which requires control or metering of fluid and gaseous media. Skinner will be pleased to make recommendations on your particular design applications — they have for hundreds of others. Write today for details and catalog.

Skinner ELECTRIC VALVE DIV.
formerly Allied Control Valve Division
THE SKINNER CHUCK COMPANY
135 Belden Ave., Norwalk, Conn.
Mention Item NED-5126 when writing

AW SUPER-DIAMOND FLOOR PLATE
GIVES YOU THE EXTRAS AT NO EXTRA COST

You get maximum safety in AW Super-Diamond Floor Plate because, wet or dry the exclusive pattern grips without a slip. It's easy to clean and easy to match. It has over 1001 uses in plants and on products.

EXTRA Safety!
EXTRA Economy!
EXTRA Service!

FREE —Write for our 16 page catalog L-35

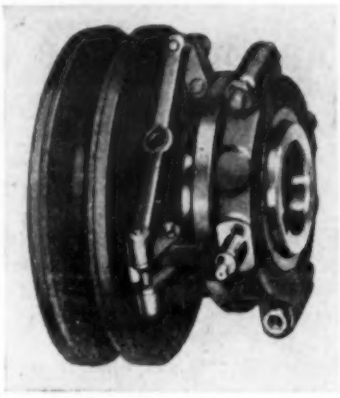
AW SUPER-DIAMOND
FLOOR PLATES THAT GRIP
A Product of ALAN WOOD STEEL COMPANY
Conshohocken, Pa.
Mention Item NED-5127 when writing

LIQUID DUPLICATOR

Improved method of paper moistening is employed in line of Vivid liquid duplicators. Work ranging from 3 x 5-inch cards to 9 x 17½-inch sheets can be produced at speed of 75 copies per minute. Moistening is accomplished by train of rollers. Fluid capacity is large, and when machine is shut off, all fluid in distributing trough returns to the reservoir. Master sheets can be used repeatedly until ink is exhausted. Made by **L C Smith & Corona Typewriters Inc.**, 185 Almond St., Syracuse, N. Y.

Mention Item NED-5128 when writing

FRICTION CLUTCH



Toggle type, over-center Morse-Rockford friction clutches are available in capacities ranging from 0.5 to 1.7 horsepower per 100 revolutions and are suitable for wide range of industrial use. Toggles are factory assembled with release mechanism and adjusting plate. Entire operating assembly comes off in one piece when clutch is disassembled. Made by **Morse Chain Co.**, Dept. ND, 7601 Central Ave., Detroit 8, Mich.

Mention Item NED-5129 when writing

INDUSTRIAL LIFT TRUCK

Two models of this battery operated Load-Mobile lift truck have capacities of 3000 and 5000 pounds. Large capacity cushion-rubber wheels equipped with sealed ball

bearings assure maximum efficiency. Operator can ride standing or seated facing in either forward or backward direction as shown. Safe operation is assured through incorporation of 'dead-man' controls so that when operator removes his foot from pedal, brake is applied. No-load speed is from 3.5 to 4 miles per hour, full load speed is from 2.25 to 3 miles per hour, and full lift is 4 inches. Additional features include separate motor hydraulic lift, antifriction bearings in all links, sealed ball bearings in driving mechanism, large battery, large brake and positive control. Made by **Market Forge Co.**, 54 Garvey St., Everett 49, Mass.

Mention Item NED-5130 when writing

GEARS

WHAT KIND *do* YOU *need?*

IF YOU use gears in the product you make, we believe it will pay you, as it has many others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making the following types of gears:

- **SPUR.** Straight, helical and internal. Sizes from 16 pitch, 1½" dia. (approx.), to 1½ pitch, 36" dia. (approx.).
- **HERRINGBONE.** Sizes from 1½" to 15".
- **SPIRAL BEVEL.** Sizes from 16 pitch, 1½" dia., (approx.), to 1½ pitch, 28" dia., (approx.).
- **STRAIGHT BEVEL.** Sizes from 16 pitch, 1½" dia. (approx.), to 1½ pitch, 28" dia. (approx.).
- **HYPOID.** Sizes from 1½" to 28" dia. (approx.).
- **ZEROL.** Sizes from 16 pitch, 1½" dia. (approx.), to 1½ pitch, 21" dia.
- **WORMS AND WORM GEARS.** Worms to 7" dia. Worm Gears to 36" dia.
- **SPLINED SHAFTS.** Lengths to 45", diameters from 1" to 6".
- **DIFFERENTIALS.** Complete units.

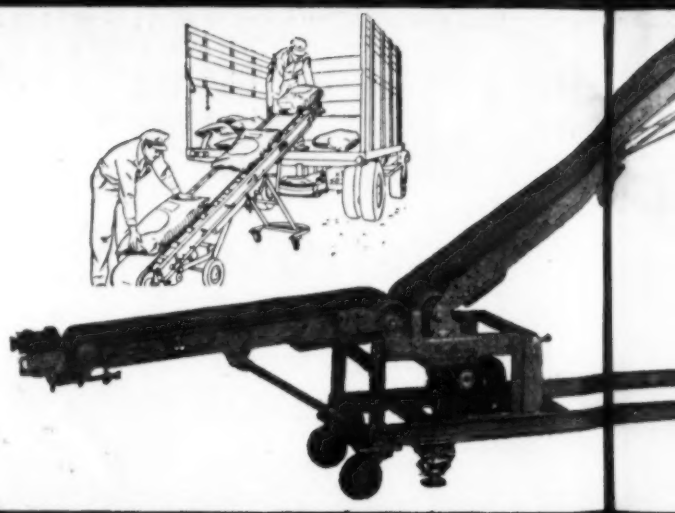
Ask for a copy of interesting, illustrated descriptive brochure. FAIRFIELD MANUFACTURING CO., 317 South Earl Avenue, Lafayette, Indiana.

FAIRFIELD *for FINE GEARS*
Mention Item NED-5131 when writing

Flights are made of oil resistant neoprene, reinforced by steel backing plates. These travel through 4", 6" or 8" iron pipe and are pulled by a high torque gear transmission enclosed in an oil-tight gear case.

Wednesday for
HONA CRAN
HOUILLE
Mention Item N 132 when

MATHEWS
REVERSIBLE, PORTABLE BELT C
12' 16' 19' LONG — 12" and 16" B
COMPLETE, READY TO OPERATE WITH POWER P
SECTION AND ALL ELECTRICAL EQUIPMEN



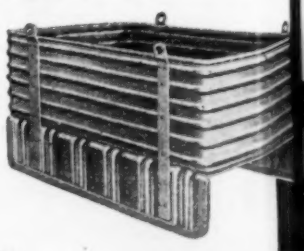
AVAILABLE ON A NATIONAL BASIS THROU
Mention Item N 133 when

YOU CAN PINCH EVERY INCH
OF STORAGE SPACE
with UNION METAL
Materials Handling Equipment

HERE'S "picture proof"—another typical example—how Union Metal Tiering Skid-Boxes put non-paying "overhead" on a *paying* basis.

The Tiering Skid-Boxes are making use of valuable air rights, by efficiently stacking unit loads of parts ready for shipment to production areas. Steel Skid-Boxes may be used outdoors equally well.

Union Metal rugged, durable Boxes, Pallets, and Skids reduce handling costs because they help keep floor space clear . . . increase production line efficiency . . . move, store, or handle materials quickly and safely in unit loads. For complete information, write The Union Metal Manufacturing Co., Canton 5, Ohio.



Mention Item N 134 wh

THE *New*

Houdaille*

CONVEYOR

Collects—Transports any type of solid or fibrous material that will settle to the bottom of a tank. It eliminates expensive, laborious time-consuming manual methods.

*Pronounced Hoo-dye

HOW CAN YOU USE THIS CONVEYOR?

There are hundreds of applications for this continuous automatic conveyor. It is already proved by installations that are operating in the metal working and other fields. Here are some suggested uses:

METAL WORKING (wet or dry) Metal Chips, Cast Iron Dust, Aluminum Oxide, Abrasive Sludge
SETTLING TANKS Contamination, Scale
FOUNDRIES Foundry Sands, Slag
PACKING PLANTS Cracklings and Similar By-Products
FOOD PROCESSING
SOAP MFG. Soaps
REFRACTORIES Ceramic Powders, Aggregates, Refractory Materials, Cement
MANY OTHERS— Such as COAL, FLY ASH, Etc.

Write today for complete information. Engineering service is available.

NATIONAL CRANE CORP. 405 Wabash Avenue, Lebanon, Indiana
a subsidiary of
HOUDAILLE-HERSHEY CORPORATION

Mention Item NED-5132 when writing

NEWS

BELT CONVEYER

and 16" BELT WIDTH

WITH POWER RECEIVE
CAL EQUIPMENT

WRITE TODAY FOR COMPLETE INFORMATION

SAFELY, EASILY ADJUSTABLE by ONE PERSON

MATHEWS CONVEYER COMPANY

ELLWOOD CITY, PENNA.
PORT HOPE, ONTARIO
SAN CARLOS, CALIFORNIA

DISTRIBUTED THROUGH AUTHORIZED DISTRIBUTORS

Mention Item NED-5133 when writing

UNION METAL

Materials Handling Equipment

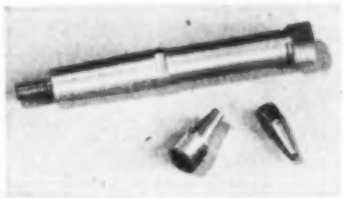
Mention Item NED-5134 when writing

WATER COOLING FOUNTAIN

Designed for office, industrial and commercial use, this compact water cooler delivers up to 20 gallons of chilled drinking water per hour. Refrigeration is provided by Meter-Miser sealed rotary mechanism which uses Freon-12 refrigerant. Utilization of waste cooled water to precool supply water contributes to economy of operation. Waist-high bubbler and valve operated by pushbutton or foot pedal are single unit. Temperature of drinking water can be controlled by regulating dial. Bonderized cabinet is finished in bronze lacquer, and stainless steel is used in top and trim. Mechanism is accessible readily by removing front panel. Made by **General Motors Corp.**, Frigidaire Corp., Dayton 1, O.

Mention Item NED-5135 when writing

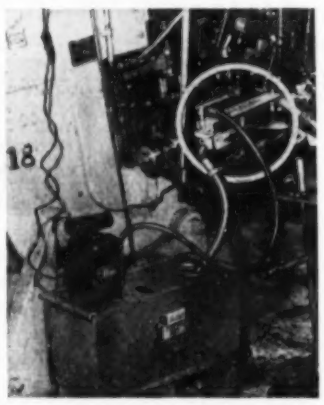
INTERNAL FINISHING TOOLS



Standard line of carbide Taper Mount series Micro-Mills now includes nine sizes from ⅜ to 1½ inches in diameter. Bores can be sized in one or two passes. Standard spindles or quills can be adapted for mounting of these mills, and instant and positive alignment is assured. Two steep tapers are mated, and mill is secured in place by means of retaining screw. Tools can be used for finishing materials up to Rockwell 62-C hardness and can be reground many times at minimum of cost. Made by **Severance Tool Industries Inc.**, 761 Iowa St., Saginaw, Mich.

Mention Item NED-5136 when writing

PUNCH PRESS STOCK OILER

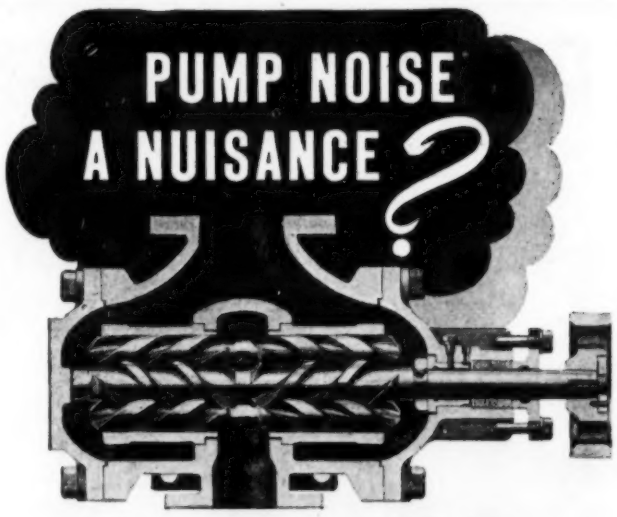


Roll or strip stock is oiled automatically as it is fed to punch press or other machine by means of this Stocklube pressure feed oiling device. It keeps stock clean, increases die life and permits use of wide range of lubricant viscosities. Three sizes are available to accommodate 6, 12 and 24-inch widths and all thicknesses up to 3/16-inch.

Lubricant is pumped from 5 or 12-gallon reservoir by ¼-horsepower motor driven gear pump. Oil is sprayed over top and bottom surfaces of stock passing through unit. Excess oil is squeezed off and drains back into reservoir. Solids are separated from oil by series of baffles before oil is recirculated. Made by **Graymills Corp.**, 1948 Ridge Ave., Evanston, Ill.

Mention Item NED-5137 when writing

PUMP NOISE A NUISANCE?



Install an **IMO**

The IMO Pump has no valves, reciprocating parts, or gears to cause noise and vibration. The rotors of the IMO oil pump turn smoothly and quietly.

IMO pumps can be furnished for practically any capacity and pressure required for oil, hydraulic-control fluids and other liquids.

Send for Bulletin I-144. W

IMO means I MOVE OIL

IMO PUMP DIVISION of the
DE LAVAL STEAM TURBINE CO.
TRENTON 2, NEW JERSEY

Mention Item NED-5138 when writing

More Power to You with
HEIN-WERNER HYPER*-POWER UNIT HYDRAULIC JACKS
in Your Factory

Here's smooth, full power for hundreds of lifting, bending, pushing, pressing or moving applications in your plant. Hein-Werner HYPER-POWER Unit Hydraulic Jacks assure you of GREATER SAFETY, COMPLETE DEPENDABILITY and LONGER SERVICE LIFE.

*HYPER, according to the dictionary, means over, above, beyond the ordinary.

Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity. Consult your nearest industrial supply dealer, or write us for details.

HEIN-WERNER CORPORATION
WAUKESHA, WISCONSIN

Mention Item NED-5139 when writing

Automatic **REZNOR** GAS FIRED UNIT HEATER

JUST 3 MORE MONTHS UNTIL HEATING SEASON

INSTALL REZNOR HEATERS WHEN TIME IS FAVORABLE

Next winter you'll appreciate a decision you make *now* to modernize with Reznor "automatic" unit heating. Make the installation before the pre-winter tie-up of tradesmen. Avoid the inconvenience of heating-season changes. Reznor gas fired units solve heating problems for any size buildings—from the corner drug store to the mammoth factory.

IT CIRCULATES SUMMER AIR

Reznor units have no idle season. Summer air is circulated by the BIG, QUIET FAN. Abundant heat is evenly distributed where you want it in winter.

ECONOMICALLY AUTOMATIC

Write, today, for a description and details of the REZNOR AUTOMATIC, GAS FIRED UNIT HEATER.

REZNOR *Gas fired unit heaters*

SUSPENDED OR FLOOR MODEL

A SIZE FOR EVERY NEED

REZNOR CO. MERCER 14, PENNA.

GAS FIRED HEATERS SINCE 1888

NO BOILERS • NO STEAM LINES
NO FUEL STORAGE • NO FIRE TENDING

Mention Item NED-5140 when writing

YOUR NEXT STEEL TAPE RULE

...Personalized!

Compare these features with any others.

- 7/16" tip
- Clearly etched graduations both sides of blade
- Lever brake—no creeping blade
- Replaceable blade
- 6 or 8 ft. lengths
- Direct reading inside measure
- Chrome plated steel case—no rough edges

MASTER
REG. U.S. PAT. OFF.
WOOD AND STEEL TAPE RULES

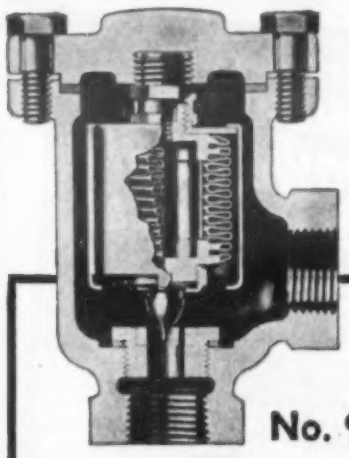
Master Rule Mfg. Co., Inc.
201 Main Street, White Plains, N. Y. C-7

I enclose $2.00 for the 6 ft. Streamline
$2.50 for the 8 ft. Streamline

Engrave my name (75c extra). Please print clearly.

NAME.....
ADDRESS.....
CITY..... STATE.....

Mention Item NED-5141 when writing



SARCO
Thermostatic STEAM TRAPS

No. 9 In its latest design, this well known steam trap is twice as fast in venting air and removing condensate from steam heated equipment. Capacity has been doubled. The low price justifies a separate trap on each coil or jacket, for highest efficiency. No seats to change when used on differing steam pressures up to the maximum for each type.

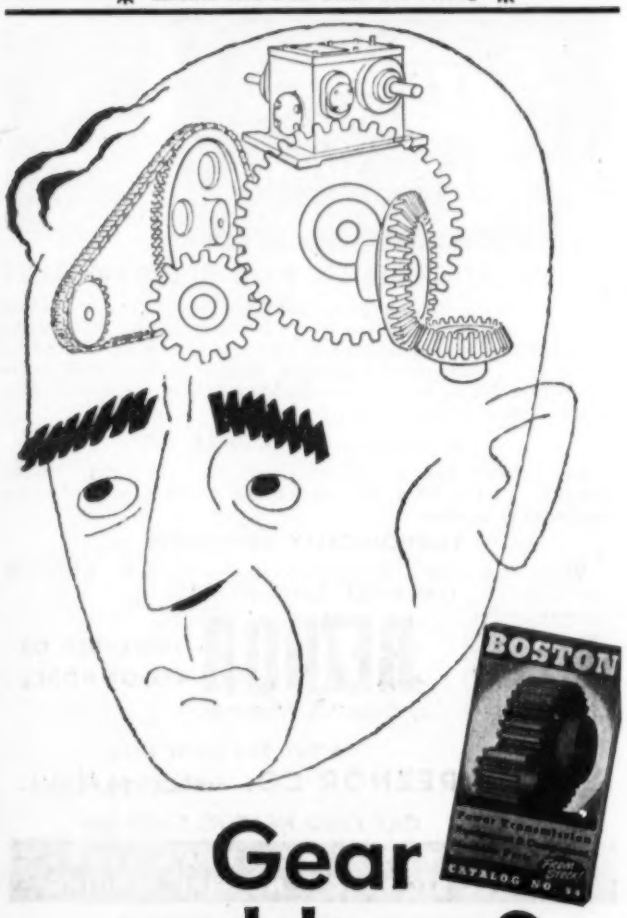
Where quick heating-up is important, the thermostatic trap is best.

Available in sizes ½" to 2", for pressures to 300 p.s.i. Catalog 250.

207

SARCO SAVES STEAM — SARCO COMPANY, INC. Empire State Bldg., New York 1, N.Y. SARCO CANADA, LTD., TORONTO 5, ONTARIO

Mention Item NED-5142 when writing



Gear problems?

This great data book has Your answers — Get it!

FREE This valuable data book which shows you how to make important savings in design, manufacturing and maintenance costs using Boston *Stock* Component Machine Parts. Contains 101 separate groups of products — gears, chain, sprockets, speed reducers, etc. — 4326 individual items — engineered, mass produced to custom standards for your application. Also contains much valuable working data for designers, engineers, maintenance men.

Name..... Position.....

Company.....

Street.....

City..... Zone..... State.....

BOSTON GEAR WORKS

One of the world's most complete lines
62 distributors in major cities
23 Hayward Street, Quincy 71, Massachusetts

Mention Item NED-5143 when writing

PRECISION TIMER

Model No. T1 precision dual timer will either break an electrical circuit after preset number of minutes and seconds or show elapsed time for an operation. It can be set for period of time from 2 seconds to 60 minutes. While calibrations on dial indicate 1 second, time values as small as ¼-second can be controlled accurately by interpolating between divisions.

Timing mechanism is enclosed in black cubical case. Timer is operated by synchronous motor and uses a Micro Switch to provide accurate shutoff when indicator is returned to zero. Made by **Instrument Development Laboratories,** 229 W. Erie St., Chicago 10, Ill.

Mention Item NED-5144 when writing

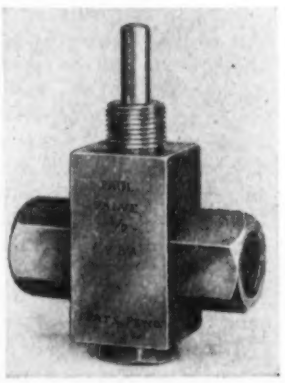
TINNING PENCIL

Applied with oxyacetylene or city gas flame at 450 F, this Kromover tinning pencil will rustproof spots, regalvanize and perform other tinning operations on oil impregnated bronze, burned cast iron, stainless steels and black iron. Protective coating formed by pencil is corrosion resistant. Surface preparation consists of wiping off oil and dirt with clean rag; it is not necessary to remove scale. Made by **All-State Welding Alloys Co.,** 96 W. Post Rd., White Plains, N. Y.

Mention Item NED-5145 when writing

AUTOMATIC VALVE

Light actuating force required to open this Paul automatic valve adapts it for use on automatic machines where water, coolants, gases or liquids of any kind must be turned on and off in controlled sequence. It can be actuated by cam, lever, solenoid or diaphragm. Whenever fluid flows through venturi in valve, precision ball automatically shuts off flow. Stem is pushed down to open valve. There is negligible pressure drop through valve, and it is self-cleaning. Stainless steel, Monel, bronze or other construction can be supplied to meet demands of service. Standard sizes are ½, ¾ and 1-inch with standard National Pipe Thread connections for pressures up to 125 pounds per square inch. Made by **Paul Valve Corp.,** 683 Third Ave., New York 17, N. Y.



Mention Item NED-5146 when writing

If you Manufacture...

YOU CAN SAVE *3 Ways* WITH ESSEX "PACKAGED" WIRING HARNESS

1 Engineering 2 First Cost 3 Installation

Scores of users have found that they save time, trouble and money by turning their electrical wiring harness problems over to Essex specialists. Essex *One-Source* service handles the intricate job of producing lighting, ignition and control harness assemblies *custom-built* to your exact specifications and *complete* with all manual and electrical control devices for quick, efficient installation. Through intensive specialization in wiring harness assemblies, Essex has developed economical production.

WIRE SX PRODUCTS

ESSEX WIRE CORP.
WIRE ASSEMBLY AND CORD SET DIVISION
SALES DEPARTMENT
MONTICELLO, INDIANA

Sales Offices: Atlanta, Ga.; Boston, Mass.; Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; Detroit, Mich.; Kansas City, Mo.; Los Angeles, Calif.; Milwaukee, Wis.; Newark, N. J.; Philadelphia, Pa.; Portland, Oreg.; San Diego, Calif.; San Francisco, Calif.; St. Louis, Mo.

Mention Item NED-5147 when writing

For Handling Hydrocarbons

Valves Are Made of HASTELLOY Alloy B

The valve pictured here is used in the piping of isobutane used for blending in the manufacture of 100-octane aviation gasoline. It is a 6-inch valve and is made entirely of HASTELLOY alloy B, except for a bronze hand wheel and top nut.

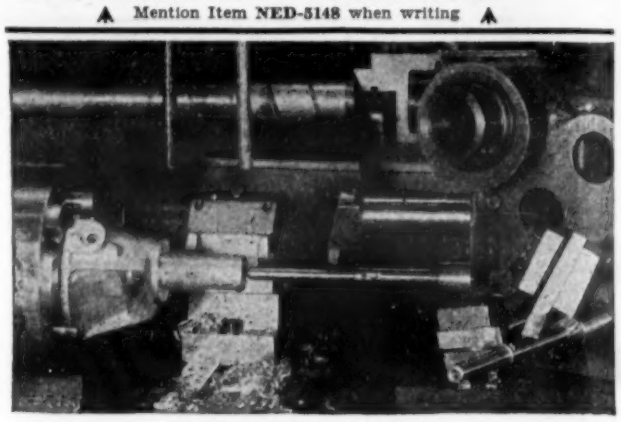
HASTELLOY alloys are used in petroleum refining because they resist severe conditions of corrosion. They are available in four grades to withstand the corrosive action of acids, alkalies, and other chemicals over a wide range of temperatures and concentrations. The alloys also resist oxidizing agents.

For further information, write for the booklet "HASTELLOY High-Strength, Nickel-Base, Corrosion-Resistant Alloys."

HAYNES STELLITE COMPANY
Unit of Union Carbide and Carbon Corporation
UCC
General Offices and Works, Kokomo, Ind.

"Hastelloy" is a registered trade-mark of Haynes Stellite Company.

Mention Item NED-5148 when writing



MADISON *BOREAMING INCREASES PARTS PRODUCTION 70% FOR EASY WASHERS

Here's the story: An aluminum casting required the following operations on inside and outside diameters — Rough bore 1st ID — Rough bore 2nd ID — Finish 1st ID — Chamfer ID — Face Shoulder — Turn 1st OD — Turn 2nd OD — Finish 1st OD — Finish 2nd OD — Thread 2nd OD.

Using single point tools, all six of the turret faces were required to finish a single casting. 19.7 parts per hour were completed.

With Madison Boreaming, EASY WASHING MACHINE CORP. was able to accomplish the same machining on three turret faces, permitting two completed castings per turret revolution. 33.6 parts per hour were completed.

Thus with two Madison tools Easy gained a production increase of 70.5%. Why not put Madison Boreaming to work for you? Write for the new Madison Catalog. It shows complete lines, prices and grinding instructions.

*Completed boring operation.

MADISON
MANUFACTURING COMPANY
DEPT. ED- MUSKEGON, MICHIGAN

Mention Item NED-5149 when writing

Better Stainless Steel Castings...

A sound basis for better product service and dependability is *better* stainless steel castings.

Michiana experience and background of testing, study and practical application assure EXACTLY the corrosion resisting characteristics required and uniformity of casting quality.

Prompt metallurgical assistance is gladly offered to determine the alloy that best meets the requirements of your product. MICHIANA PRODUCTS CORPORATION, Michigan City, Indiana.

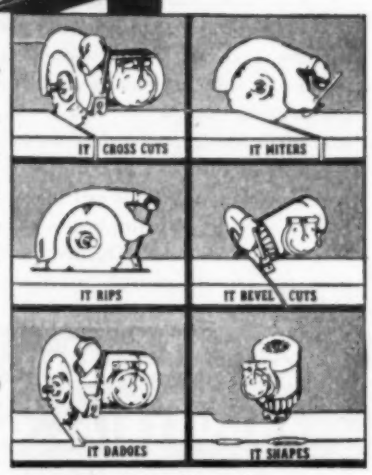
Send for Illustrated Booklet III.

MICHIANA STAINLESS STEEL CASTINGS

Mention Item NED-5150 when writing

THE NEW DEWALT

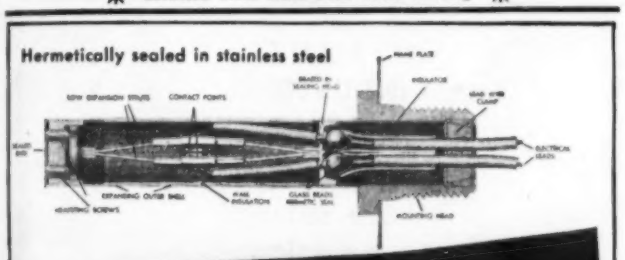
ALL-PURPOSE POWER SAW!



Does the work of *many* machines! Accurate, flexible, dependable—precision built for continuous service. Write for catalog.

DEWALT, INC.
197 Fountain Ave., Lancaster, Pa.

▲ Mention Item **NED-5151** when writing ▲



AT LAST...
A "High-Fidelity" Fire Detector

Check these Fenwal DETECT-A-FIRE advantages:

FAST . . . combines fixed-temperature response with rate-of-rise bias for speed and sensitivity • **HERMETICALLY SEALED** . . . permanently protects internal mechanism • **EXPLOSION-PROOF** by itself • **VERSATILE** . . . temperature settings up to 725°F. . . . for alarm or release circuits • **ECONOMICAL** . . . one element every 25 ft. • **REPEATABLE** . . . resets itself . . . nothing to replace • **RUGGED** . . . stands up under shock and vibration • **DECADES OF PROTECTION** . . . lasts as long as the stainless steel shell • **LISTED** . . . by Underwriters' Laboratories, Inc.

Write for complete information about this revolutionary advance in the art of fire protection.
Fenwal, Incorporated, 31 Pleasant St., Ashland, Mass.

*Reg. U. S. Pat. Off.

Fenwal

DETECT-A-FIRE

The universal fire alarm THERMOSWITCH* control
SENSITIVE . . . *but only to heat*

▲ Mention Item **NED-5152** when writing ▲

HUNDREDS OF EXTRA WORKING HOURS WITHOUT PAYROLL EXPENSE

Yes, here's a proved way to get more productive hours without adding to payroll. With the Zip-Lift handling the back-breaking work in production, around machines, along assembly lines, loading platforms, etc., you cut handling time on every move. Minutes saved every day add up to extra hours of work. Costs go down — profits go up.

The Zip-Lift is the real wire rope electric hoist with full magnetic push button control. Ask for Bulletin H20-3.

Capacities up to 2,000 lbs

HANDLE IT *"Thru-the-Air"* AT LOWER COST

P&H ELECTRIC HOISTS
Milwaukee 14, Wis
4537 West National Avenue

HARNISCHFEGER CORPORATION
HOISTS WELDING ELECTRODES MOTORS P&H EXCAVATORS ELECTRIC CRANES ARC WELDERS

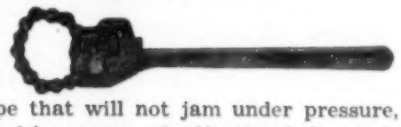
▲ Mention Item **NED-5153** when writing ▲

TIME DELAY RELAY

Almost any time delay interval is possible in series No. 11400 alternating current and series No. 6400 direct current time delay relays. Both units incorporate planetary differential and 'capstan' type clutch mechanism which is designed to drive switch - actuating arm when clutch holds third element of differential stationary. Mechanical amplification of forces obtained in 'capstan' clutch allows use of small electromagnet. Relays are available in wide range of voltages and speed ratings. They are compact and have normal weight of approximately 1 pound, and their flexibility of design permits modification for individual applications. Made by **A. W. Haydon Co.**, 111 W. Main St., Waterbury 32, Conn.

▲ Mention Item **NED-5154** when writing ▲

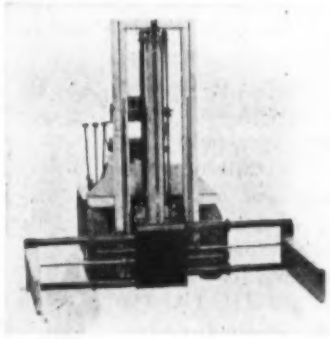
CHAIN TYPE TONG WRENCH



Fitting of pipe in corners, coils and banks as well as in other relatively inaccessible locations is facilitated with this E-Zee Chain Tong wrench which has instantly reversible ratchet action. Design is such that maximum amount of chain wrap is used. Of type that will not jam under pressure, chain can be tightened by means of adjusting bolt. Made by **E-Zee Tool Mfg. Corp.**, 136 Liberty St., New York 6, N. Y.

▲ Mention Item **NED-5155** when writing ▲

PALLETLESS LOAD HANDLING



Designed for attachment to Hyster models No. 20 and No. 40 lift trucks, Load-Grab hydraulically controlled squeezing mechanism will handle bales of cotton, rags or wool; cartons or boxes; and barrels and drums. Loads of 1780 and 3350 pounds, respectively, can be handled. Steel arms are lever controlled from driver's seat and spread from minimum of 17 inches to maximum of 62 inches on model No. 20 truck and up to 66 inches on model No. 40 truck. Optional sets of equipment for specialized uses of attachment include spiked arms for clutching wooden boxes and crates, rubber faced arms for particularly gentle handling, drum loading arms and conventional pallet load arms. Made by **Hyster Co.**, 2906 N.E. Clackamas St., Portland 8, Ore.

▲ Mention Item **NED-5156** when writing ▲

SMOOTH POWER FLOW FAST or SLOW at a touch of the finger!

LOVEJOY Select-O-Speed VARIABLE SPEED TRANSMISSIONS

One of a hundred applications. Paper shredder with Select-O-Speed built into drive to control width of paper.

Select-O-Speed is available in types and sizes from fractional to 1 h.p. Ratios up to 10 to 1. Write for this catalog. It gives facts and figures about Variable Speed Transmissions that can help you reduce costs and raise production.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. LAKE ST., CHICAGO 44, ILL.

▲ Mention Item **NED-5157** when writing ▲

RBM Alternating Current WORK SOLENOIDS

Electrical steel is wound to form cylindrical plunger. Impregnated coil enclosed in drawn frame. Assures low iron loss in less space than conventional stacked lamination construction.

Greater flexibility in mounting. Cylindrical plunger permits clevis to be rotated to any position.

Consider this solenoid where space and cost are factors. Available with continuous duty magnet coils to 600 volts A.C.

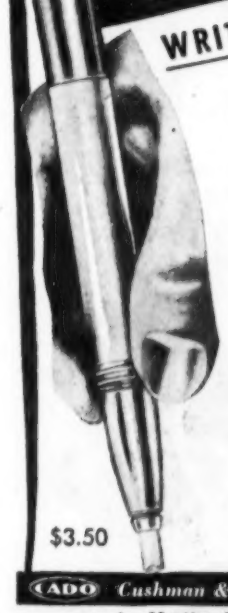
For more complete information write for Work Solenoid Bulletin No. 610. Address Department G-7.

R-B-M DIVISION, Essex Wire Corporation
Logansport, Indiana

▲ Mention Item **NED-5158** when writing ▲

the handiest marking tool you've ever used!

Flo-master FOUNTNBRUSH and INKS



WRITES ON ANY SURFACE!

No marking job is too tough for the *Flo-master*. Name your surface—cellophane, metal, foil, glass, wood, waxpaper—it writes on anything! Dries instantly. Won't rub off.

Carry the *Flo-master* in your pocket like a fountain pen. Won't leak—thanks to automatic valve control. *Flo-master* instant-drying Ink is available in black and seven brilliant colors. Interchangeable nibs make possible lines from 1/32" to 3/8" wide.

Ask your supplier about Flo-master FOUNTNBRUSH and INK sets today. They contain everything you need to make marking a cinch!

$3.50

CADO *Cushman & Denison Mfg. Co.* 135 West 23rd St., New York 11

▲ Mention Item **NED-5159** when writing ▲

FMC ACCORDION CONVEYOR

MAKES BOX HANDLING EASY

ONE CONVEYOR DOES ALL THIS

EXTENDS to 10 ft. Always the right length for your particular need.

CONTRACTS to 3 ft. Light and compact. Takes little storage space.

CURVES around corners. Split rollers keep boxes on without side rails.

TWISTS into "S" turns. Adaptable to your present plant layout.

RAISES to 30" and **LOWERS** to 20". Gravity feed . . . no power needed.

RUGGED steel construction. Each roller alone can take 80 lb. load.

DIFFERENT WIDTHS AVAILABLE. 14" and 18" widths standard. With skate wheels in 10", 14" and 18" widths on special order. *There is a model to fit your problem.*

Write Dept. ND for complete details and prices today

FOOD MACHINERY CORPORATION
MATERIAL HANDLING DIVISION • RIVERSIDE, CALIFORNIA

▲ Mention Item **NED-5160** when writing ▲

1869 Penco

A SPACE SAVER!

The Penco Two-Person Steel Locker, Type 734, is designed for use in cramped quarters or for any installation where a saving in floor space is an important consideration. Two persons are comfortably accommodated in the space usually allotted to a single person.

The Usual High Quality Penco Construction Conforms to Federal Government Specifications

Write for literature. Permit Penco Engineers to determine the most efficient arrangement for your requirements.

PENN METAL CORPORATION of PENNA.

L. Lewis Sagendorph, *Founder, 1842-1909*

82 Oregon Ave. Philadelphia 48, Pa.

Fabricators of Steel Lockers, Cabinets, Shelving and Corrugated Metal Pipe *In Business Continuously Since 1869*

▲ Mention Item NED-5161 when writing ▲

At Last! ...a much easier-to-handle 2½" to 4" geared Pipe Threader

Quick-set workholder — fully enclosed gear.

New RIDGID No. 4P

● Now you can have a 2½" to 4" geared threader you can handle with unusual ease—carry it, put it on pipe; it's got handles you can get hold of and control it with. That's only one of the many RIDGID features of this new 4P die stock that you'll enjoy.

Balanced Loop-handles. Easy to pick up and put straight on pipe—won't slip or tip over. Easy to carry. . . .

Quick-setting Workholder. Mistake-proof—sets to size *before* you put it on pipe, no bushings. . . .

Extra Easy Upkeep. Twin-anchored drive shaft turns in oilless bronze bearing—never needs oil. Grease packed gear fully enclosed. . . .

Easy Pipe Threading. Four sets of 5 high-speed steel dies easily cut clean accurate threads. Ratchet handle with each 4P; RIDGID universal drive shaft available for power drive.

Make sure of these easier-work advantages—buy the 4P at your Supply House.

RIDGID WORK-SAVER PIPE TOOLS

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

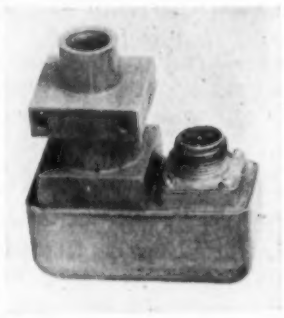
▲ Mention Item NED-5162 when writing ▲

FOOT SPRAY DEVICE

Developed for use in combatting athlete's foot in industrial plants, this series C Peda spray dispenser unit ejects fine solution-mist on feet of individual stepping on aluminum grill after leaving shower room. Spray solution is contained in fully enclosed tank with built-in drainage system, and it cannot be diluted or contaminated. Single filling of 3½-gallon tank provides for 12,000 to 16,000 applications. Unit is 26 inches in diameter and stands 5½ inches high. Made by **Peda Spray Co.**, 26 E. 42nd St., New York 17, N. Y.

▲ Mention Item NED-5163 when writing ▲

PRESSURE SWITCH



Designed to make or break an electrical circuit at preset pressures, series 9084 pressure switches are adaptable for service on different fluids in wide range of operating pressures. Typical applications include automatic operation of sequencing valves, and automatic control of fluid pumps and hydraulic systems of all types. Switch can also serve fuel, oil, air conditioning, Freon, gas or air systems. Pressure range is from 100 to 5000 pounds per square inch. Unit compensates for temperature changes and maintains constant setting from −50 to 150 F. Made by **Saval Co.**, Dept. NED, 1915 E. 51st St., Los Angeles 11, Calif.

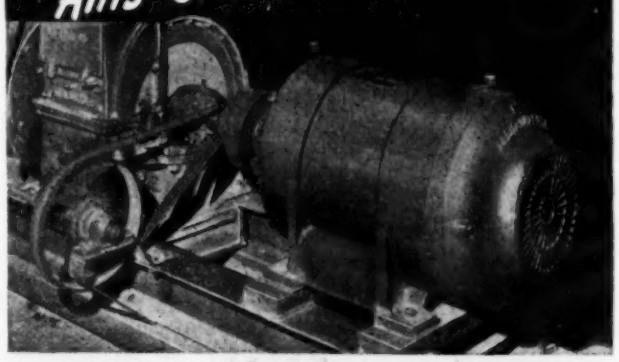
▲ Mention Item NED-5164 when writing ▲

MASONRY DRILL KIT

Spiral flutes of these Hercules carbide-tipped masonry drills remove dust rapidly, thereby assuring clean sharp-edged accurate holes. There is no sidewall breakage even when holes are close together. Drills can be used in any portable pneumatic or electric drill or hand brace and are available in from 3/16 to ¾-inch diameters in increments of 1/16-inch, and in ⅞, 1, 1⅛, 1¼ and 1½-inch sizes. Deep holes in concrete, cement, brick, slate, marble, stone and other types of masonry materials can be drilled rapidly and with minimum of friction. Three standard sets furnished in roll-up kits are available. Made by **Whitman & Barnes**, 2200 W. Fort St., Detroit 16, Mich.

▲ Mention Item NED-5165 when writing ▲

Peak Performance under adverse Conditions with Allis-Chalmers Motors!



WHERE DIRT, acid fumes or moisture deteriorate windings in ordinary motors, Allis-Chalmers totally-enclosed, fan-cooled, induction motors are giving trouble-free service in hundreds of installations! Whether you need a squirrel cage, wound rotor, or synchronous motor from ½ to 200 hp, call your nearest A-C dealer or district office representative. Or send for "Handy Guide for Quick Selection of Electric Motors," 51B6052H, describing A-C's complete line of various type motors in ratings up to 25,000 horsepower.

A 2489

ALLIS-CHALMERS MILWAUKEE 1, WISCONSIN

▲ Mention Item NED-5166 when writing ▲

GET THE RIGHT RPM THIS EASY WAY

Call on Westinghouse for INDUSTRIAL GEARING

Why become "hot and bothered" by gearing problems? Let Westinghouse geared drive engineers solve them for you. They'll give you expert application help . . . to produce the right drive for your needs.

Westinghouse gear manufacturing facilities afford extreme accuracy and a wide range of heat-treating processes, offering you gearing that meets every design specification . . . that gives long, trouble-free service.

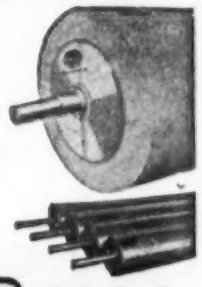
For help on your gearing problems, call your nearest Westinghouse office, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

J-07267

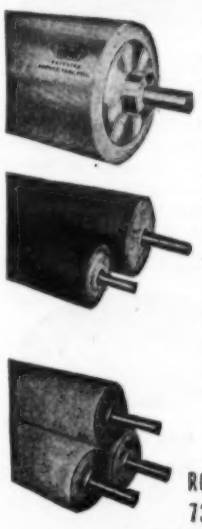
Westinghouse INDUSTRIAL GEARING

▲ Mention Item NED-5167 when writing ▲

MANY INDUSTRIAL ROLL PROBLEMS are solved by using



SHAF-TITE ROLLS



Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel, plastic, etc. Whatever your roll problem, put it up to

RODNEY HUNT

SEND FOR CATALOG TODAY!

Industrial Roll Division

RODNEY HUNT MACHINE CO.

73 Maple Street, Orange, Mass.

▲ Mention Item NED-5168 when writing ▲

For heating water, oils, paraffin, chemicals, etc.

VULCAN

ELECTRIC IMMERSION HEATING UNITS

3 TYPES OF FLANGES "BOLT ON" Pipe Thread Straight Thread.

Single and three heat with various metal casings. Complete with gaskets, terminal cover, etc.

A new VULCAN Electric Immersion Heater is especially designed for melting fats, greases, and similar compounds.

VULCAN ELECTRIC COMPANY

DANVERS 7, MASS.

Makers of Electric Soldering Tools, Solder Pots and of a wide variety of Heating Elements for assembly into manufacturer's own products; and of Heating Specialties that use Electricity.

▲ Mention Item NED-5169 when writing ▲

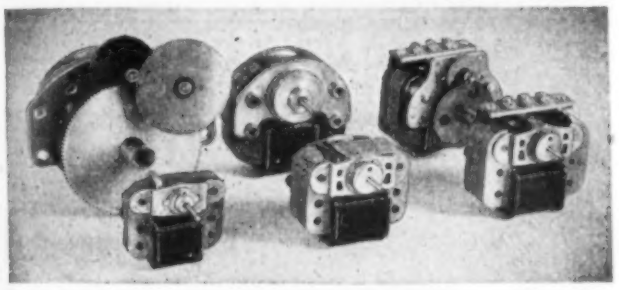
Save set-up time with this "Magic" Quick-Change Chuck. When you raise locking ring, collet drops out automatically for a quick, safe tool change without stopping spindle! Four styles of collets available to accommodate various tools. Consult our engineers on adapting "Magic" Quick-Change Chucks and Collets to your production problems.

Requirements for most sizes can be filled immediately. See pages 98-102 of Scully-Jones Catalog No. 500.

Scully-Jones AND COMPANY

1952 SO. ROCKWELL ST., CHICAGO 8, U.S.A.

Mention Item NED-5170 when writing



BARCOL FRACTIONAL • HORSEPOWER MOTORS

★ UNIDIRECTIONAL, SYNCHRONOUS OR REVERSIBLE
★ WITH OR WITHOUT GEAR REDUCTIONS
★ UP TO 1/30 HORSEPOWER
★ ALSO FAN BLADES 1-3/4" TO 12" DIAMETER
★ ENGINEERING SERVICE
★ WRITE FOR DATA SHEETS . . .

Selected Territories are Available for Qualified Representatives

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS

Mention Item NED-5171 when writing

For better work in less time . . . at less cost . . . USE

DISSTON BITE-RITE FILES

files that are DIFFERENT

Different in design, in performance, in results. And those differences combine to improve workmanship at a saving of time and money. Here are the reasons:

Instead of being cut in straight rows, the teeth of Disston Bite-Rite Files are staggered. This enables you to cut straighter . . . when teeth are straight rowed, file tends to follow direction of rows. You can do smoother work . . . absence of tracking eliminates much refinishing. You can speed up your filing, for teeth are sharp-biting and hold their edges. And you can count on longer file life . . . lower file costs.

There are Disston files for all needs, including a complete line of Disston Swiss Pattern Files . . . precision made for precision work.

For other metal-cutting tools of extra quality, ask for DISSTON METAL CUTTING BAND SAWS . . . HACK SAW BLADES . . . CIRCULAR SAWS . . . CARBOLOY FITTED CIRCULAR SAWS . . . TOOL BITS.

Write for FREE folder, "What File?" showing recommended procedure in selecting proper file.

Staggered teeth eliminate file tracks . . . make finished surfaces smoother. Rounded gullets form curls instead of chips . . . thus to a great extent are self-cleaning.

WHEN YOU BUY A DISSTON PRODUCT YOU BUY DISSTON STEEL SKILL and SERVICE

HENRY DISSTON & SONS, INC., 729 Tacony, Philadelphia 35, Pa., U.S.A.
In Canada, write 2-20 Fraser Ave., Toronto 1, Ont.

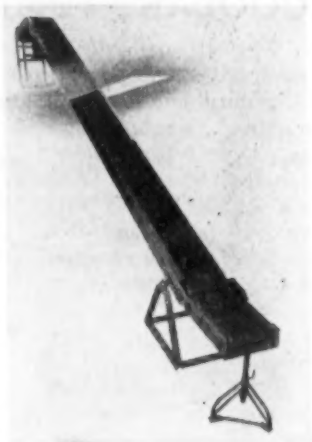
Mention Item NED-5172 when writing

SELF-INKING ROLLER MARKER

Marking, coding, addressing and labeling operations in shipping departments, warehouses, packing rooms and similar places are facilitated by means of this Algene self-inking roller marking device. Single forward motion with slight pressure assures clear impression. After mark has been made, stamping element snaps back into position automatically for next operation. Cased in sturdy plastic, marker will withstand rough handling and provide thousands of impressions before re-inking is necessary. Built-in felt ink rollers on both ends assure even ink distribution. Solid dies or interchangeable rubber type can be mounted on printing roller. Made by **Wm. A. Force & Co.**, 210 Nichols Ave., Brooklyn 8, N. Y.

Mention Item NED-5173 when writing

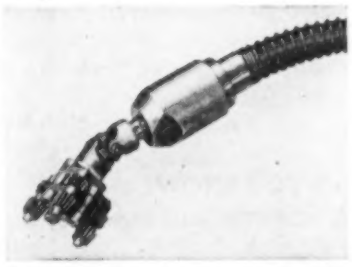
FLOOR-TO-FLOOR CONVEYOR



Incorporating slider-bed type construction complete with nosed-over delivery and power-driven tail feeder, Sage floor-to-floor conveyor is furnished ready for installation which requires approximately one to two hours. Standard units are built with 8 to 24-inch wide, three-ply, Ruff-top rubber covered 28-ounce duck belt. Power is supplied by gearhead motor which can be plugged into any convenient outlet by means of 25-foot rubber-covered cord. Auxiliary equipment includes gravity wheel conveyors, roller conveyors and ball transfers to be coupled to floor-to-floor conveyor as required. Made by **Sage Equipment Co.**, 28 Essex St., Buffalo 13, N. Y.

Mention Item NED-5174 when writing

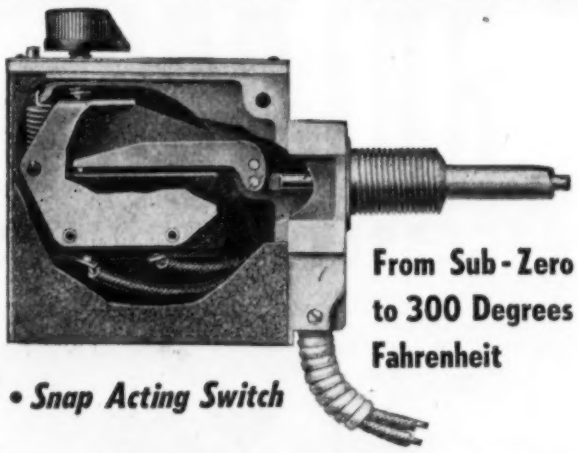
BOILER TUBE CLEANER



Of swing-frame type, this improved cutter head for cleaning boiler tubes is disassembled or assembled without tools. Tool is essentially spider fitted with arms which swing out on arm pins under centrifugal force. Arms carry cutter pins on which are mounted sharp, heat treated cutters that remove scale. Cone cutters in front engage thick accumulations, and following star cutters polish tubes. Cutter pin is locked in place with keeper which fits into slots in arm and pin. Either air or water driven motors are available for driving heads. Made by **Elliott Co.**, Martin St., Jeannette, Pa.

Mention Item NED-5175 when writing

BONDEE *Electric* THERMOSTAT



From Sub-Zero to 300 Degrees Fahrenheit

• *Snap Acting Switch*

Close Control of Temperature

of liquids, gases or air. Is sensitive to temperature change of a fraction of a degree. Capacity 10 Amp. 125 Volts A.C. *Rugged Construction. Easily Installed.*

Write for Descriptive Folder.

ALLOY BELLOWS ENGINEERING CO.
935 Greyton Rd. • CLEVELAND 12, OHIO

Mention Item NED-5176 when writing

One HOMESTEAD 4-WAY VALVE WILL DO... YOU WILL SAVE THE COST OF Two

One Homestead 4-Way Quarter-Turn Valve will do the work of three ordinary shut-off valves when used as a fluid "flow changer" or as a "switching" valve. Homestead 4-Way Valves are also used as operating valves to control single or double acting pistons that travel the full stroke length. Their use thus saves initial valve and installation costs, cuts operating time, reduces maintenance expense. Added advantages are long, trouble-free operation and dependable service.

Homestead 3-Way or 4-Way Valves can be furnished in sizes ½" to 12", in brass, acid-resisting bronze, semisteel, steel, monel, Ni-Resist and other alloys for specific temperature, pressure and fluid conditions.

Write today for complete information.

HOMESTEAD VALVE MFG. CO.
P. O. BOX 84 CORAOPOLIS, PA.

Mention Item NED-5177 when writing

PROTECTION from THE WET!

with TOWER'S OILED or RUBBER GARMENTS

The use of TOWER'S protective garments reduces to a minimum, loss of man-hours because of exposure to the wet, dampness, spraying or foul weather. All garments are scientifically designed to afford maximum working comfort and protection. Made in bright yellow, which in itself provides an important protective feature, there is a TOWER'S garment especially adaptable for every type of industrial activity.

For folder of styles and detailed information write Department ND.

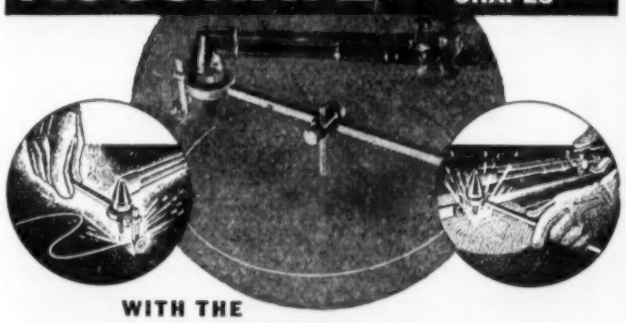
OILED RUBBER

TOWER'S FISH BRAND — A. J. TOWER CO. — TOWER'S ARROW BRAND

24 SIMMONS ST. BOSTON, MASS.

Mention Item NED-5178 when writing

NOW YOU CAN CUT ACCURATE CIRCLES STRAIGHT LINES SHAPES



WITH THE FLASH CIRCLE BURNER

Here, at last, is a precision tool that eliminates guesswork; handling hoses and haphazard methods of cutting circles, curves, straight lines with a flame cutting torch. Streamlined for quick and simple height and radius adjustment, the FLASH is proficient in any position, whether vertical or horizontal. Many industrial plants have proved the FLASH a real time saver and that it greatly increasse the utility of any cutting torch.

A FLASH MODEL FOR MOST TORCHES

Make	Tip No.
VICTOR	CD-0
VICTOR	1
VICTOR	2
NATIONAL	AA-4
OXWELD	1
OXWELD	6
AIRCO	00
AIRCO	1
SMITHS	1-4
HARRIS Monarch	28
HARRIS Speed King	
REGO KX, REGO Small	
PRESTOWELD PUROX	

Models Listed, $6.50
When ordering FLASH Circle Burner, specify make and size cutting torch it is desired for.

SCIENTIFIC RESEARCH
DEPT. 11 · 1618 N. VANCOUVER AVENUE
PORTLAND 12, OREGON

Mention Item NED-5179 when writing

The LOGAN ARIDIFIER *self-cleaning* SEPARATOR *for* COMPRESSED AIR

GET THIS FREE BULLETIN 147 . . . explains how centrifugal force continuously flush-cleans the Aridifier while at the same time purging 92% of all moisture, oil and dirt in the compressed air line. You'll have trouble-free, automatic protection for tools, orifices and sprayed jobs . . . with no down time . . . and no line back pressure.

LOGAN ENGINEERING CO.
4904 Lawrence Avenue, Chicago 30, Illinois

Logan ARIDIFIER
Dries and Cleans Compressed Air

Mention Item NED-5181 when writing

Eriez NON-ELECTRIC PERMANENT MAGNETIC PULLEYS *are Industry Proven*

TWO and one-half years ago the first Eriez Non-Electric Permanent Magnetic Pulley was installed at The B. F. Goodrich Co., Akron, Ohio. Its efficiency in operation speaks for itself—now, four additional units are used in B. F. Goodrich processing lines—and others will replace old current consuming pulleys. Eriez has on record hundreds of similar instances in every type of industry—firms who have found that the safe and positive means of tramp iron removal is with Eriez Non-Electric Permanent Magnetic Pulleys.

When you specify Eriez Pulleys, you are specifying the most modern economical form of Magnetic Separation. Through steadily increasing efficiency, Eriez Pulleys are today performing operations considered impractical a few years ago. They are replacing many electrical devices with less weight and in smaller space. Eriez Pulleys are available in 58 sizes . . . Write for Bulletin 501-A . . . it may result in considerable savings to you.

Write for this bulletin

When It's Magnetic Protection.. See Eriez First!
59 East 12th Street

ERIEZ MANUFACTURING CO.
Erie, Pennsylvania

Mention Item NED-5182 when writing

MACHINE TOOL ATTACHMENT

Designed to increase operating scope of vertical milling machines as well as other machine tools, this horizontal milling attachment is adjustable to almost any position and performs precision milling, drilling and boring at any angle. It will accommodate one or more cutters up to 4 inches in diameter and will take standard chuck of ½-inch capacity for drilling, boring and reaming at 90-degree angle to drive shaft. Precision built with gear ratio of 1:3, attachment is easily and quickly installed or dismounted. Made by **Bemis & Call Co.**, 150 Main St., Springfield, Mass.

Mention Item NED-5183 when writing

COOLANT PUMPS

Vertical submerged and side-wall mounted Norwood sealless coolant pumps are designed for general circulation duty and machine tool applications. They are of low-head, single-stage types and are close-coupled to motor. Type KF double suction submerged model operates vertically with suction flooded at all times. It is adaptable for use on machines having large coolant tank and is especially suitable for handling liquids containing considerable amounts of solids, chips or suspended matter.

Model KW side-wall mounted unit also handles coolants containing solids or abrasive particles and is commonly used on grinding and honing machines. Two lengths of adapters for varying depths of reservoirs are available. Impellers of both pumps are cast corrosion-resistant bronze. Sizes range from ¼ to 1 horsepower for 10 to 70-foot heads. Made by **Allis-Chalmers Mfg. Co.**, Dept. 914, 6900 Norman St., Milwaukee 1, Wis.

Mention Item NED-5184 when writing

DO YOU KNOW?

■ ELECTROPLATING of any commercial magnesium alloy with chromium, silver, gold, copper, brass, cadmium, zinc or other metals by essentially standard methods is made possible by process for depositing thin film of zinc on magnesium. Initial steps remove contamination and provide correct reactive surface, and then extremely adherent zinc film is deposited. From this point, plating is effected in conventional manner. Process is available under license from Dow Chemical Co., Jefferson Ave., Midland, Mich.

Mention Item NED-5185 when writing

ROLOCK PROCESSING CARRIERS

Another advanced Rolock design, incorporating the inherent superiority of fabricated construction, is pictured in this retort. Upper sealing trough is assembled from stamped alloy sections by welding. The design results in lower dead weight and improved heat transfer through thinner sides. Longer life is assured, and the integral seal facilitates removal.

Every Rolock custom-built Carrier has similar built-in advantages . . . takes normal rough treatment, gives long service at low hourly cost, cets rejects . . . increases production.

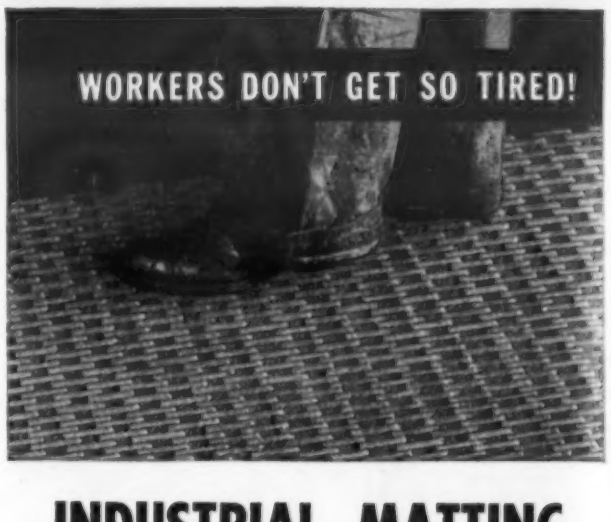
Solve processing problems in your plant now . . . write for our catalog showing 225 successful designs.

ROLOCK, INC., 1410 KINGS HIGHWAY, FAIRFIELD, CONN.

CUSTOM-BUILT . . . FOR BETTER WORK AND LOWER COST

31RL48

Mention Item NED-5186 when writing



INDUSTRIAL MATTING aids production 3 ways

It's safer! It's shock absorbing! It's skid-proof! Industrial men everywhere are using rubber link matting. BUILT TO FIT YOUR SPECIAL REQUIREMENTS.

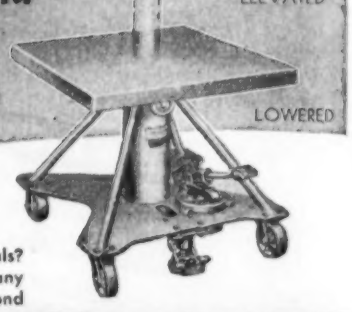
Write for details:

KOFFLER SALES CORPORATION 3757C N. RACINE AVE. CHICAGO 13, ILLINOIS

Mention Item NED-5187 when writing

THE ANSWER To Many LIFTING Problems

LYON-Raymond PORTABLE HYDRAULIC ELEVATING TABLE



Worried about costs? Speed? Safety? Damage? — and other factors in handling materials? Then look into these many jobs this handy Lyon-Raymond Elevating Table is designed to do.

HERE-ARE JUST 12 OF ITS USES:

1. Die handling
2. Sheet feeding
3. Adjustable section in conveyor system
4. Work table
5. Assembly bench
6. Positioning work to machine
7. Support for overhanging work
8. Adjustable test bench
9. Transfer table
10. Positioning parts for attachment
11. Welding positioner
12. Loading and unloading

We have prepared an illustrated bulletin full of suggestions that methods engineers will find most helpful. It's free! Write for your copy today!

LYON-Raymond Corporation
707 Madison St., Greene, N. Y.

Mention Item NED-5188 when writing

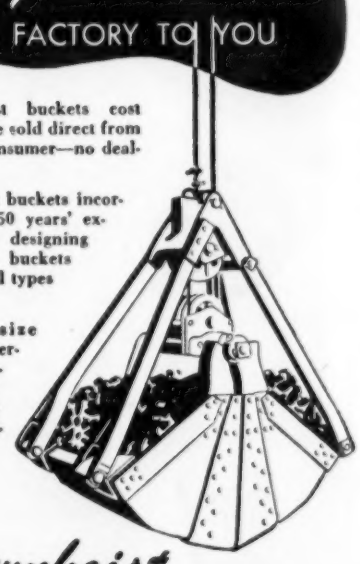
Buy a Better Bucket FOR LESS MONEY *Buy Brownhoist*

DIRECT FROM FACTORY TO YOU

• Brownhoist buckets cost less—they are sold direct from factory to consumer—no dealer profits.

• Brownhoist buckets incorporate over 50 years' experience in designing and building buckets for handling all types of materials.

• Standard size rope-reeve, power-wheel and link-type Brownhoist buckets are available for immediate shipment.



Brownhoist

Write for illustrated catalog of Brownhoist Buckets

INDUSTRIAL BROWNHOIST CORPORATION
139 Washington Ave., Bay City, Michigan

Mention Item NED-5189 when writing

"New Process"

● PUNCHES ● DIES ● RIVET SETS

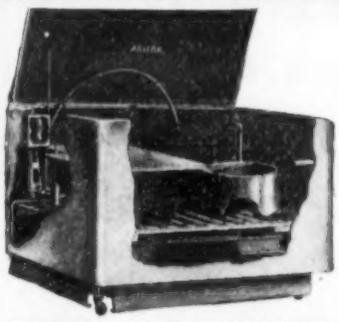
have served the railroad industry for over thirty years. You can purchase these tools with confidence, and know your shop can depend upon maximum performance.

We also specialize in punches and dies for TIE PLATE and SPLICE BAR, and will be glad to receive your specifications. *Write today for your copy of Catalog No. 46.*

GEO. F. MARCHANT COMPANY
1420-34 So. ROCKWELL ST., CHICAGO 8, ILL.

▲ Mention Item NED-5190 when writing ▲

CLEANS FASTER . . . SAFELY



CLEANS DIES, TOOLS PARTS MACHINES

GRAY-MILLS AGITOR COLD PARTS CLEANING SYSTEMS

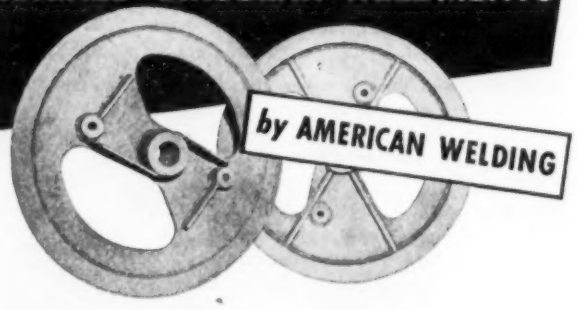
Maintenance departments, tool rooms, machine shops, repair departments will need the Agitor. It's safe . . . versatile . . . portable . . . inexpensive. 4 way action saves time and trouble.

SEND FOR CATALOG

GRAY MILLS CORPORATION
1973 Ridge Ave.
Evanston, Ill.

▲ Mention Item NED-5191 when writing ▲

Rugged Construction Machinery Uses
DESIGNED CIRCULAR WELDMENTS



● This specially designed weldment combines an arc welded center section of flame cut gussets and web (AISI-C-1020), hub and bosses (AISI-C-1030) and a flash-butt weld outer gear ring (AISI-C-1045) which is 24" O. D. x 21" I. D. x 2".

Manufacturers who have unusual welding jobs often call in American Welding for design and manufacturing suggestions. They know they receive the full benefit of 31 years of experience. They know also that their jobs are of the highest quality when manufactured by American Welding's Controlled Technique.

May we apply this experience to your product? An American Welding representative will be glad to call at your convenience.

SEND FOR ILLUSTRATED BOOKLET

THE AMERICAN WELDING & MFG. CO.
170 DIETZ ROAD • WARREN, OHIO

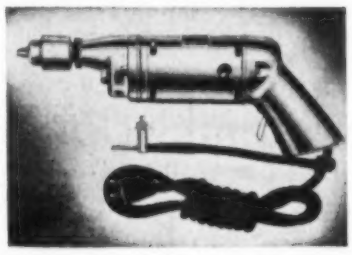
▲ Mention Item NED-5192 when writing ▲

SMALL STEEL DISK WHEEL

Added to standard line of Circle metal wheels, this juvenile toy wheel has electrically welded steel disks, baked red enamel finish and is furnished with Oilite or ball bearings for ½-inch axle. Tire is semi-solid and is 10 x 1.75 inches. Hub length can be either 2⅛ or 2-5/16 inches. Wheel weight is 3 pounds. Made by **Circle Metal Mfg. Co.**, 4300 E. Pacific Way, Los Angeles 23, Calif.

▲ Mention Item NED-5193 when writing ▲

PORTABLE ELECTRIC DRILL

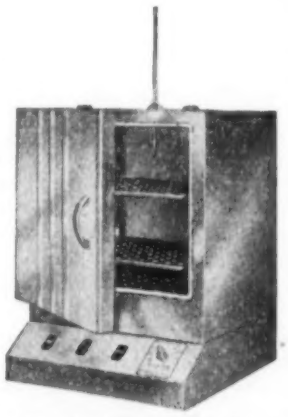


Light in weight and easy to use, model No. 250 portable electric drill has capacity of ¼-inch in mild steel and 3/8-inch in hardwood. It operates on either alternating or direct 110 - 115 - volt current. Pistol grip handle houses Cutler-Hammer trigger type switch. Jacobs key type chuck, 6-foot rubber-covered cable and oil retaining bronze bearings are standard equipment. Made by **Portable Electric Tools, Inc.**, Dept. R, 255-259 W. 79th St., Chicago 20, Ill.

▲ Mention Item NED-5194 when writing ▲

ELECTRIC LABORATORY OVEN

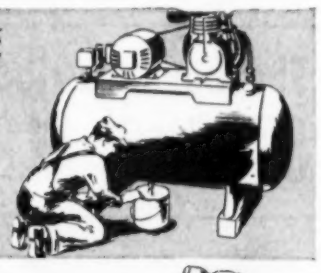
Fabricated of stainless steel, this electric laboratory oven is available in three sizes for use in conducting various tests with paints, rubber, plastics, chemicals, ceramics, clays, dyes, textiles, glass products, oils, china, perfumes and numerous other products. Automatic timer switch can be provided to control heating cycle in range of 1 to 60 minutes. Uniform temperature is secured from heavy nichrome element which covers entire bottom area. All six sides of oven are insulated with Therm-O-Flake bonded block.



Smallest 500-watt size oven has interior measuring 8 x 8 x 8 inches, 800-watt size unit is 12 x 12 x 12 inches and largest 1750-watt size has 14¾ x 17¾ x 19-inch interior. All models have Underwriters' Laboratories approved hydraulic-electric thermostat which has sensitivity of plus or minus 0.5 C. Smaller ovens operate on 110-115-volt alternating current, and large oven is available for operation on 110 or 220-volt, single-phase 60-cycle alternating current. Made by **Modern Electric Laboratory**, 6133 S. Wentworth Ave., Chicago 21, Ill.

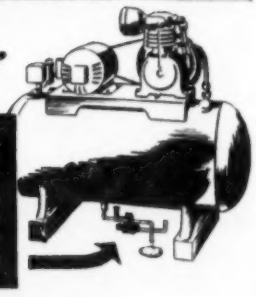
▲ Mention Item NED-5195 when writing ▲

Eliminate this costly nuisance



By Installing

NP *Automatic* WATER EJECTOR VALVES



● *Automatically remove collected water from compressed air systems.*
● No air loss
● Adjustable capacity
● Easily installed
● Immediate delivery

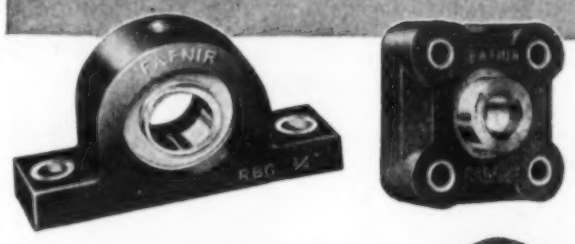
Write for Bulletin No. DC-25-A

NATIONAL PNEUMATIC COMPANY
Industrial Sales Division
Rahway, New Jersey

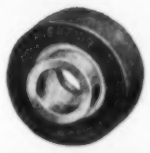
Pneumatic Specialists Since 1904

▲ Mention Item NED-5196 when writing ▲

for light-duty applications
FAFNIR RUBBER-MOUNTED BALL BEARING UNITS
Quieter! Cheaper!



Write for descriptive, illustrated folder. The Fafnir Bearing Company, New Britain, Connecticut



FAFNIR BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

▲ Mention Item NED-5197 when writing ▲

PROMPT DELIVERY!
Equipto FULL CAPACITY STEEL TRUCKS

No. 1179
WIDER • HEAVIER • MORE DURABLE • LARGER CAPACITY • LONGER • JUMBO SIZE, EASY ROLLING RUBBER TREAD WHEELS

No. 1170
Size 2' x 3' x 34½"

Heavy steel construction with 11 gauge uprights and 16 gauge reinforced trays, strong and rigid. Large 5 inch x 1¼" rubber tread wheels, stationary in front, swivel in rear, providing quiet, easy portability. Durable olive green baked enamel finish. Shipped semi-K.D. to save on freight. Shipping wt., No. 1170, 100 lbs.; No. 1179, 130 lbs.

Equipto 690 PRAIRIE AURORA, ILLINOIS

▲ Mention Item NED-5198 when writing ▲

THE *Electropunch*

THE NEW LITTLE PUNCH WITH 1,000 USES

Electropunch is the ideal tool for wire cutting, staking, marking, riveting, piercing, blanking and drawing lightweight materials such as metals, plastics, fabrics, leather, etc.

Electropunch does the work of heavier, bulkier punches more quickly and easily—is designed to increase production, save money and cut fatigue.

Feather-touch button control gives a maximum impact of 2,250 lbs. When variable transformer is used continuous range of impact up to maximum is possible.

IMPORTANT FEATURES

- Operates on any 110 volt, 60 cycle A C line
- Requires less than 1 foot of bench space—easily moved about
- Simply but ruggedly constructed—minimum parts to get out of order
- No motors or compressors to lubricate or adjust
- Height overall 22½". Base 9" x 9¾". Wgt. 45 lbs.

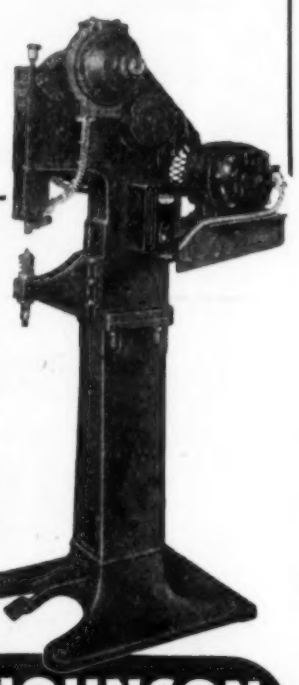
Write today for complete information and specifications

Shown is Model BH with 2,250 lbs. impact. Also available in Model B with 1,500 lbs. impact.

BLACK & WEBSTER, INC.
139 MASSACHUSETTS AVE., BOSTON 15, MASS.
DEPT. G

Mention Item NED-5199 when writing

Save Time... Cut Costs
with
T-J RIVITORS



You'll do a better job of rivet setting . . . faster . . . with T-J Rivitors! Automatically feeds and sets solid rivets. Assures a solid rivet joint of 10% to 15% greater strength. Geared to speed and accuracy—the T-J Rivitor fits into today's tough production schedules. Cuts costs by using solid rivets instead of more expensive types. Wide range of uses. Write for bulletin. The Tomkins-Johnson Co., Jackson, Mich.

FOR TOUGH JOBS ...SPECIFY T-J

TOMKINS-JOHNSON RIVITORS

Mention Item NED-5200 when writing

PUT *Air Power* TO WORK

- INCREASE PRODUCTION
- REDUCE WORKER FATIGUE
- SAVE TIME AND MONEY

FREE
AIR CYLINDER BULLETIN

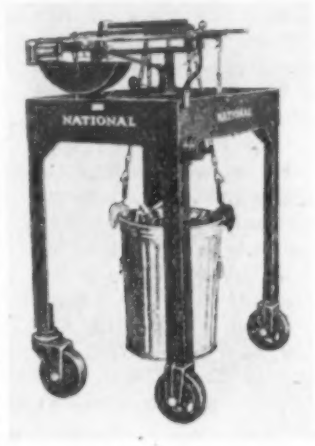
Write for your copy of this helpful, informative bulletin now!

Schrader Air Cylinders have over 1,001 muscle-saving adaptations. Wherever pushing, pulling, lifting, turning, tilting or reciprocating action is required Schrader Air Cylinders will do it more efficiently than ordinary mechanical or manual methods. Streamline your shop with Schrader Air Cylinders and step up your production now. Write to Dept. DEN 723.

A. SCHRADER'S SON
DIVISION of SCOVILL MANUFACTURING COMPANY, INCORPORATED
478 Vanderbilt Ave. Brooklyn 17, N.Y.

Mention Item NED-5201 when writing

COUNTING & WEIGHING SCALE

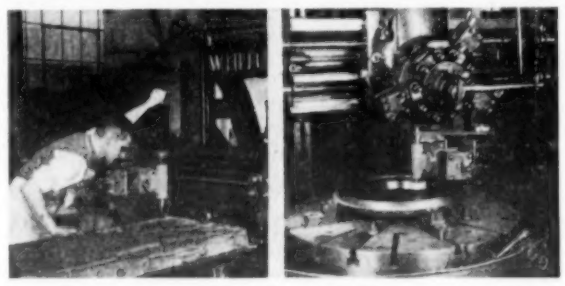


Mounted on 4-foot high legs equipped with casters, portable counting and weighing scale facilitates taking of inventories or can be moved to end of production line to weigh and count workpieces. Scale is rolled over container, and after grabs are fastened, hydraulic lift swings load clear of floor so that direct readings can be taken from indicating head. Weighing capacity is 1000 pounds, and counting ratio is 200 to 1. Scales can be supplied with grabs to handle barrels, boxes, steel plates, mill stock, bales, tote boxes, drums and crates. For small boxes and fragile packages, platforms suspended by chains can be furnished. Made by **National Scale Co.**, 43 Mill St., Springfield, Mass.

Mention Item NED-5202 when writing

MACHINE TOOL UNIT

Usable as auxiliary to wide variety of standard machine tools, this Versa-Mil unit provides for precision milling, drilling, boring and grinding operations. It also



serves as portable machine tool that can be taken to large, heavy or stationary work. Unit consists of power driven head and feed table or auxiliary base which incorporates longitudinal and crossfeeds with micrometer lead screws. Means for rigid mounting on machinery or work surfaces are provided.

Mounted on compound carriage of lathe, unit will perform such diverse operations as milling keyways, faces, splines, gears and threads; drilling; reaming; boring; routing; grinding external and internal cylindrical, taper and flat surfaces; and tool grinding. With other machine tools such as planers, boring mills, horizontal mills and turret lathes, unit permits single machine to perform series of operations including milling, boring and grinding without additional set-up time.

Power is supplied by ½ or ¾-horsepower motor, and spindle speeds range from 33 to 295 revolutions per minute for various jobs. Interchangeable milling and drilling heads offer speeds up to 5175 revolutions per minute and 360 degrees of angular settings. Grinder heads with speeds of 4140 to 13,800 revolutions per minute adapt basic unit for cylindrical, surface and internal grinding. Other features include precision bearings, hardened and ground steel wearing parts and oil seals for protection of moving parts from abrasives and coolants. Made by **Versa-Mil Co.**, 30 Church St., New York 7, N. Y.

Mention Item NED-5203 when writing

The best distributor in town
STOCKS ALLEN . . . .

Socket cap and set screws, square head set screws, pipe plugs, dowel pins, shoulder screws, keys and drivers, the new Allenut * and stainless steel socket cap and set screws.

ASK US for descriptive folders or engineering assistance in product design.

ALLEN ALLEN HEAD
MANUFACTURING CO.
Hartford 2, Connecticut, U.S.A.
NEW YORK, CLEVELAND, DETROIT, CHICAGO, LOS ANGELES

*Patent Applied For

Mention Item NED-5204 when writing

REVOLVATOR GO-GETTER POWER LIFTRUCK

CUT YOUR MATERIAL HANDLING COSTS WITH THIS POWERFUL "WALK-ALONG" TRUCK

Automatic hydraulic braking, finger-tip directional control at end of handle, large dual driving wheels, delayed action control, adjustable Timken bearings.

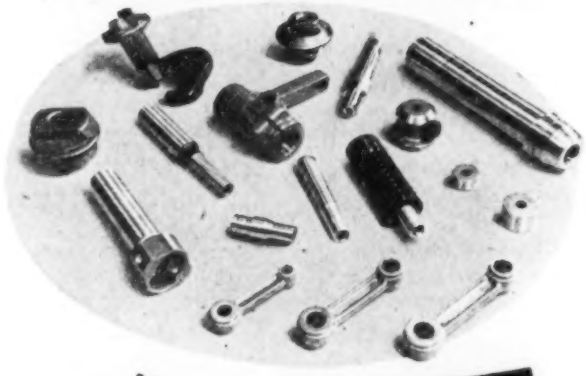
Only 27½" between control handle and back of battery. Platform of Skid Model (illustrated) lifts 4" with 3½" under clearance. Heights 6", 7", 9", 11"; lengths 36", 48", 54", 60", 72" and over. Also pallet and high lift models.

Other REVOLVATOR Products Include: Revolvator Portable Elevators, Red Giant Hand Liftrucks, Hydraulic and Traction Elevators, Barrel Dumpers and Positioners, Sectional Storage Racks.

REVOLVATOR CO.
DESIGNERS AND MANUFACTURERS OF MATERIAL HANDLING EQUIPMENT
8732 Tonnele Ave. NORTH BERGEN, N. J. Since 1904

Mention Item NED-5205 when writing

At Black and Decker Mfg. Co. . .
MINIMUM SET-UP TIME and VERSATILITY of SUNNEN HONING MACHINES



Permit
Accurate Honing of Many Holes • Economical Handling of Short Runs • Salvage of Expensive Parts

Sunnen Precision Honing Machines are used to accurately hone 25 different holes in 18 different parts. Production jobs range from .1562" to 1.1875" diameter. Both blind and open holes are held to close tolerances for straightness and roundness.

Because set-up time is never more than 5 minutes, small production runs and salvage jobs are usually completed before other machines could be set up.

Write for booklet X-MAN-5000 or, on request, a Sunnen engineer will be glad to show you how you can use Sunnen Honing in your plant.

SUNNEN

SUNNEN PRECISION HONING MACHINE

- Hones holes .120" to 2.625" in diameter
- Accuracy to .0001" guaranteed
- Hones steel, cast iron, aluminum, bronze, plastics, ceramics, glass
- Low in cost, economical to use

SUNNEN PRODUCTS COMPANY
7961 Manchester Ave., St. Louis 17, Mo.
Canadian Factory: Chatham, Ontario

331

Mention Item NED-5206 when writing

Don't BURN Paper CONVERT IT!

AIRFLUFF PAPER SHREDDER MAKES EXCELSIOR OUT OF CONFIDENTIAL PAPERS, BLUEPRINTS OR ANY WASTE PAPER

Here's the machine that destroys paper yet saves it! The AIRFLUFF Paper Excelsior Shredder, easily shreds, separates and fluffs old newspapers, confidential papers, blueprints, magazines, waste paper, corrugated cartons, tissue, Cellophane and waxed paper. Low price, simple to install. Power and maintenance cost less than 2c per 100-pound bale. Absolutely safe—present employees can easily operate. Cuts in widths from 1/8" to 3/8". Model No. 14 shreds 600 to 1800 lbs. per hour. Model No. 10 shreds 200 to 800 lbs. per hour. Write today for prices and complete facts about these remarkably simple, sturdy and efficient new AIR-FLUFF Paper Shredders.

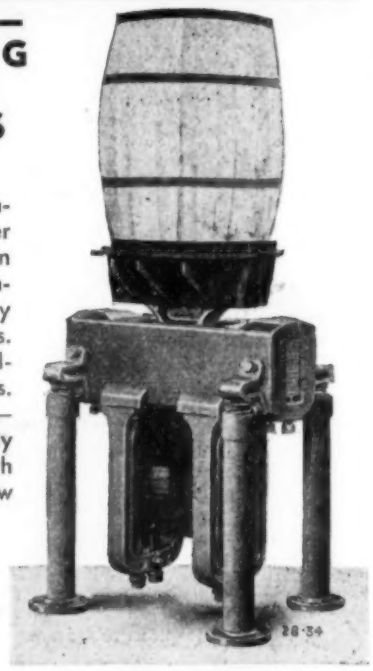
See our insert and listing in Thomas Register.

MITTS & MERRILL • SAGINAW, MICH.
1000 SOUTH WATER STREET
BUILDERS OF MACHINERY SINCE 1854

▲ Mention Item NED-5207 when writing ▲

ELECTRIC—VIBRATING BARREL PACKERS

(Patented)



These important economies—increase container capacity — cut down on packing stations — increase storage capacity —reduce shipping costs. Our test laboratory available for making tests. No. 4 Packer is shown—vibrating unit usually placed in pit beneath floor. Also special low head packers.

ALSO electric vibrating coolers, dryers, conveyors, screens, packing tables, feeders and weigh-feeders.

JEFFREY
ESTABLISHED 1877
952-99 N. Fourth St., Columbus 16, Ohio

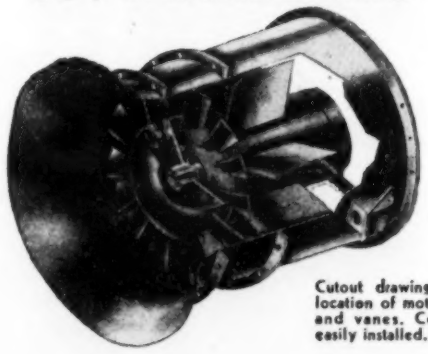
▲ Mention Item NED-5208 when writing ▲

NOW!

A great line of Stock Fans—

"Series 1000"

JOY AXIVANE FANS



Cutout drawing showing location of motor, blades and vanes. Compact—easily installed.

On-the-job adjustable blades—compact—high efficiency—easy to install—economical.

Write for Bulletin . . . Today

WAD 1 1515

Consult a Joy Engineer
JOY MANUFACTURING CO.
GENERAL OFFICES: HENRY W. OLIVER BUILDING
PITTSBURGH, PA

▲ Mention Item NED-5209 when writing ▲

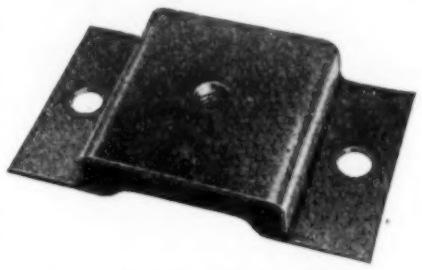
STUD & NUT SET

Conveniently arranged stud and nut sets are available in ¾, ⅝ and ½-inch standard thread sizes for class 3 fit. Each set includes four each of 3, 4, 5, 6, 7 and 8-inch studs and four each of nuts, washers, T-slot nuts and coupling nuts. Coupling nuts enable worker to obtain any stud length from 3 to 16 inches. T-slot nuts permit use of studs to full capacity of T-slot. Studs are threaded after heat treatment to eliminate distortion, and all units are cadmium plated. Made by **West Point Mfg. Co.**, 19627 Merriman Court, Farmington, Mich.

▲ Mention Item NED-5210 when writing ▲

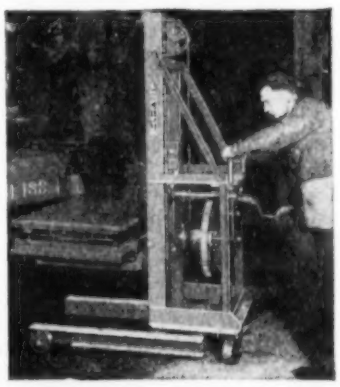
VIBRATION DAMPENING MOUNT

Designed to control shock, isolate high frequency vibration and reduce noise transmission to floor, this heavy duty Shockmount is available with load capacities up to 7500 pounds per mount. Unit is 1-3/16 inches high and has top plate contour which limits movement and sheds oil and dirt. Flexing element is oil-resistant synthetic rubber. Eliminating need for massive foundations to achieve inertia, mounts can be used to reduce enervating noise of such equipment as punch presses, textile machines and printing presses. Made by **Lord Mfg. Co.**, Erie, Pa.



▲ Mention Item NED-5211 when writing ▲

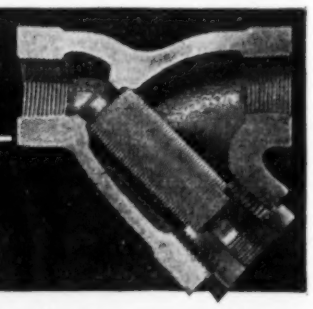
PORTABLE STOCK ELEVATOR



Dies, sheet stock and similar heavy loads can be elevated easily with this type DX heavy duty Shoplifter which is available in 1000 and 2000-pound capacities. Hoist units are of crank-up and crank-down type, and automatic load brake does not require manual setting or releasing. Safety ratchet and pawl also hold load automatically. Use of ball bearings throughout minimizes friction so that crank pressure of 20 pounds is all that is required to raise or lower load. Size is such that units can be moved through 6-2/3 x 2-foot doorways. Two 5-inch base wheels under platform and two 6-inch swivel casters at rear facilitate movement. Made by **Economy Engineering Co.**, 2681 W. Van Buren St., Chicago 12, Ill.

▲ Mention Item NED-5212 when writing ▲

It says **"STOP"** *to Solids—* **"GO"** *to Fluids*



Here is a BETTER Strainer to "police your pipelines"

- **FIRST**—*The Screen*, a high-grade, woven Monel wire basket that catches solids—lets condensate, oil or other fluids flow freely.
- **SECOND**—*Finish.* Cadmium plated for protection against corrosion and for better appearance.
- **THIRD**—*Easily Cleaned.* Blow-off bushing made for easy removal. Bushing and Screen come out together. Screen automatically aligns on reassembly.
- **THOUSANDS IN SERVICE**—Sold by over 150 Mill Supply Houses. 6 sizes from ½" to 2" for pressures up to 600 lb. Reasonably priced.

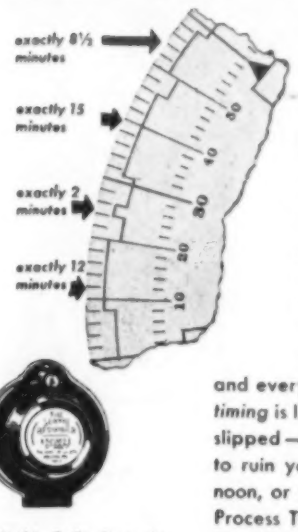
See your supply house or write for Bulletin S-201.

YARNALL-WARING COMPANY
131 Mermaid Ave., PHILADELPHIA 18, PA.

YARWAY STRAINERS

▲ Mention Item NED-5213 when writing ▲

Process Timing



Bolt this 2 lb. Recorder right to the machine itself; Let the "Process" record itself on the chart —(No ink, no pencil, no wires; the record is recorded in wax).

"The cure must be 8½ minutes"—"the heat must be applied exactly 15 minutes"—"the plating must take just 2 minutes"—"the pigment must be mixed just 12 minutes"—etc.

The *Servis Recorder* checks on this—it records just what happened—it "*times the process.*" You are no longer in the dark; from now on you know all day and every day whether your *process timing* is lived up to—or if somebody slipped—if something went wrong to ruin your product for that afternoon, or that whole shift! Write for Process Timing Catalog. The Service Recorder Co., 1375 Euclid Avenue, Cleveland 15, Ohio.

The Servis Recorder
The "Time Clock" for Machinery

▲ Mention Item NED-5214 when writing ▲

USG *ANNOUNCES—* **NEW AND IMPROVED REFRIGERATION GAUGES**

FROSTLINE FOR REFRIGERATION

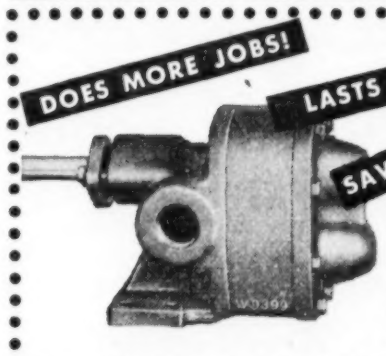
FEATURES
- Adjustable Pointer
- Removable Screw Check
- LOW SIDE Protection—200 lbs.
- Luminous Dial
- Beryllium Copper Bourdon Tube

Every Service Engineer will want a set of USG's new Frostline Gauges. "*High Side*," and "*Low Side*" gauge has adjustable pointer for easy resetting. *Low Side* gauge protected to maximum working pressure of Freon 12. Write for free literature today.

USG **UNITED STATES GAUGE**
Division of American Machine and Metals, Inc.
Sellersville (11), Pa.

▲ Mention Item NED-5215 when writing ▲

DOES MORE JOBS! LASTS LONGER! SAVES YOU MONEY!



Worthington Type GA Rotary Pump. Displacements to 56 gpm; pressures to 100 psi.

Here's a small rotary pump that handles hot, cold, thin or viscous liquids—under severest conditions. Amazingly simple and rugged, the GA has many advanced features that assure longer, lower-cost, trouble-free pumping.

Like every other pump in Worthington's complete standard line—which includes all types and sizes—the GA is "job-ready" for top performance in its particular work-range.

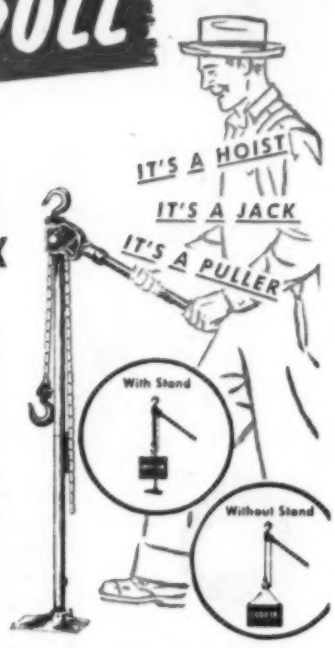
Make Worthington—with its longest experience in the field—your "pump headquarters"—for service that proves *there's more worth in Worthington.* Write to *Worthington Pump and Machinery Corporation, Dept. H821, Merchandising Division, Harrison, New Jersey.*

WORTHINGTON

BB-21

▲ Mention Item NED-5216 when writing ▲

LIFT or PULL



Easier and Faster — with the Amazing New COFFING HOIST-JACK

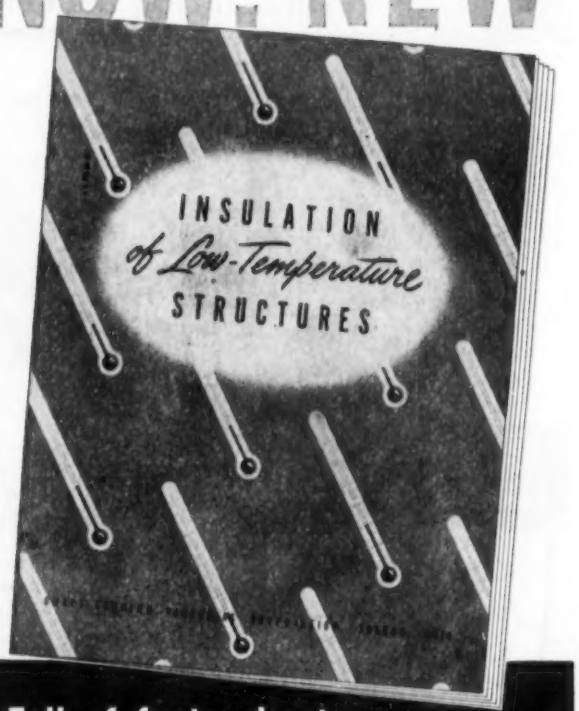
A versatile 3-in-1 tool, this new Coffing Hoist-Jack provides greater efficiency and ease of operation on scores of lifting, pulling or stretching jobs. Simplified ratchet design and sturdy construction assure safety and long life. Weighs only 23 pounds, yet lifts a 2000 pound load. Operates with stand as a jack, or without stand as a hoist or binder; quickly set up, easily portable. Tested to 100% over rated capacity. Write for Bulletin X-1

OTHER COFFING PRODUCTS—Safety-Pull Ratchet Lever Hoists • "Mighty-Midget" Puller • Electric Hoists • Spur-Geared Hoists • Load Binders • Trolleys

COFFING HOIST COMPANY
DANVILLE, ILLINOIS

Mention Item NED-5219 when writing

NOW! NEW



Full of facts about Fiberglas* Insulating Materials

32 pages of illustrated "how-to-do-it" information on the application of Fiberglas Thermal Insulating Materials for all types of low-temperature structures. Use the handy coupon to write for your copy. Owens-Corning Fiberglas Corporation, Dept. 921, Toledo 1, Ohio. Branches in principal cities.

In Canada: Fiberglas Canada Ltd., Toronto, Ontario.

OWENS-CORNING FIBERGLAS — LOW TEMPERATURE INSULATIONS

*Fiberglas is the trademark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.

OWENS-CORNING FIBERGLAS CORPORATION, Dept. 921, Toledo 1, Ohio.
Please send me a copy of the 32-page booklet, "Insulation of Low-Temperature Structures".
Name_____ Title_____
Company_____
Street & Number_____
City_____ Zone_____ State_____

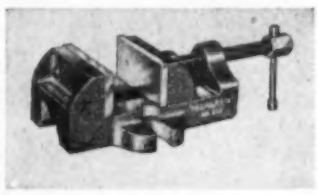
Mention Item NED-5220 when writing

PARTS CLEANING STAND

Tivit portable parts cleaner stand is sturdy welded steel unit which can be wheeled within reaching distance of job. It holds standard 5-gallon can of Kelite formula No. 555 and 5-gallon rinse can. Worker merely drops grimy parts into basket in cleaner can as they are removed from job, and after short soak, basket is lifted out and plunged into rinse can. Hinged drop-leaves at each side of stand provide extra table space when required. Tool tray at bottom holds essential tools. Caster wheels are ball-bearing equipped. Made by **Kelite Products, Inc.**, Box 2917 Terminal Annex, Los Angeles 54, Calif.

Mention Item NED-5221 when writing

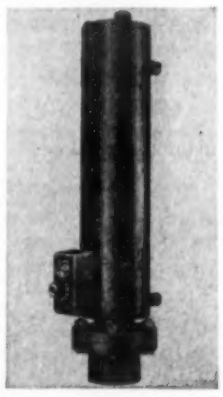
DRILL PRESS VISE



Removable steel jaws, Acme-thread screw and semisteel cast parts are features of this No. 320 Palmgren drill press vise which has 3-inch jaws that open to maximum of 3 inches. Side lugs facilitate bolting vise to machine tables. Made by **Chicago Tool & Engineering Co.**, 8378 South Chicago Ave., Chicago 17, Ill.

Mention Item NED-5222 when writing

PROCESS AIR & GAS HEATER



Heavy duty Chromalox electric heaters are designed for superheating steam and preheating air and other gases used in processing, drying, vacuum packing, conditioning plastics powders and other applications requiring dry heat. Temperatures up to 750 F are reached rapidly and are accurately maintained by thermostatic controls. Steam, air or gas enters through lower pipe connection, passes upward through larger steel pipe chamber and flows out through upper pipe connection.

Three standard sizes of heater are available and include series No. 2 which has 2-inch pipe, series No. 3 with 3-inch pipe and series No. 6 with 5-inch pipe. Capacities range from 1 to 12 kilowatts, and two or more heaters can be connected in series for larger capacities. Standard heater flange is 150-pound forged steel, and 300-pound forged steel flange is used for higher pressures. Automatic controls are available for operation of heater from 200 to 550 F and from 100 to 1000 F. Heaters can be furnished for operation on 115, 230, 460 and 550-volt current. Made by **Edwin L. Wiegand Co.**, 7509 Thomas Blvd., Pittsburgh 8, Pa.

Mention Item NED-5223 when writing

THE "Easy-tote" DEPARTMENTAL TRUCK

TRADE MARK REGISTERED

NEW — SAFE — UNIQUE — PROVEN

Down go handling costs on countless small, important but long-neglected jobs. Large and small plants use this all-purpose truck to out-maneuver and out-perform conventional hand trucks. There's nothing else like it. Three wheel arrangement, swivel caster in rear, low tilting baseplate (16" x 22"), adjustable hook and crank permit one man to handle loads up to 400 lbs. quickly, *without lifting injuries*. No need to "muscle the load" . . . see 1-2-3 below. At only $26.50 it's worth a try . . . NOW! Write for FREE bulletin E-3.

SOME TERRITORIES OPEN—WRITE
THE EASY-TOTE PRODUCTS CO.
P. O. Box 86 Buffalo, 17, N. Y.
Factory and Warehouse, Lancaster, N. Y.

MODEL E811 ONLY $26.50

Turns In Its Own Length

Pat. Applied for
OTHER MODELS AVAILABLE

Mention Item NED-5224 when writing

THERMOLIER UNIT HEATERS

While last January's cold spots in your plant are still vividly in mind act now to eliminate them next winter.

Get in touch with Grinnell or your local Thermolier Distributor. Let us show you how Thermolier Unit Heaters put heat where you want it more efficiently and at substantial fuel savings.

Thermolier's 12 points of superiority make it the first choice for efficient, trouble-free operation. Thermolier Catalog 6-E tells the whole story. Send for a copy.

GRINNELL COMPANY, INC.
Providence 1, R. I.
Branches in principal cities.

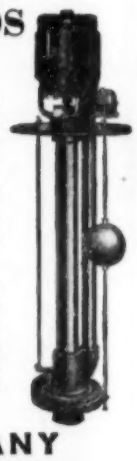
GRINNELL
WHENEVER PIPING IS INVOLVED

Mention Item NED-5225 when writing

HIGH EFFICIENCY Sump Pumps

• Deming Vertical Sump Pumps embody latest modern developments. Can be installed in wet or dry pits. Used for water drainage, pumping heavy viscous or high temperature liquids, screened sewage, and for many other services.

Complete line includes many sizes and capacities from 10 g.p.m. to 3200 g.p.m. with heads up to 120 feet and speeds from 860 to 1750 RPM for motor drive. Write for Bulletin No. 4605.



THE DEMING COMPANY
520 BROADWAY • SALEM, OHIO

DEMING THE COMPLETE LINE
PUMPS AND WATER SYSTEMS

Mention Item NED-5226 when writing

HOOVER America's only Ball Bearing with HONED RACEWAYS

Hoover The Aristocrat of Bearings
HOOVER BALL AND BEARING CO., ANN ARBOR, MICH.

Mention Item NED-5227 when writing

Bulletin 848-49-50-52 Timing Relays

A-B Quality

- Wide range of time delays available
- Electronic, motor-driven, pneumatic, or dashpot types

Four different types of timing relays provide a complete selection for every need. All have silver-alloy contacts which require no maintenance. All are extremely reliable in operation, but vary as to time delay and ranges. Delays from .025 second to 15 minutes are available. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

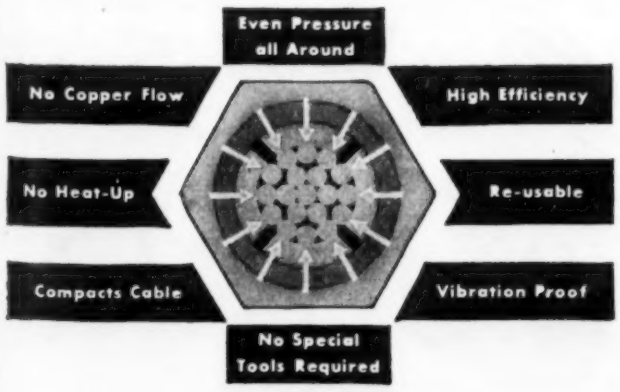
ALLEN-BRADLEY QUALITY MOTOR CONTROL

Mention Item NED-5228 when writing

NE GORILLA GRIP

The Precision CONNECTORS

—lugs, taps, terminals—for all kinds of electrical connections



The perfect grip for: Cable, tube or rod.

Write for the GORILLA GRIP Catalog today.

Sold through Electrical Wholesalers

National Electric PRODUCTS CORPORATION Box 897—Pittsburgh 30, Pa.

Mention Item NED-5229 when writing

INSULATION TESTER

Equipped with direct-reading voltmeter, this model No. 2402 alternating current insulation testing instrument has been designed for use in research, development, production and repair of equipment. Instrument measures breakdown voltages and tests insulating materials, compounds and liquids as well as appliances, cable assemblies, conductors, windings, transformers, motors and numerous other parts and components at up to 2000 volts.

Built-in autotransformer provides smooth, stepless control at high voltage output without interruption. This self-contained unit has pair of 5-foot, flexible, high-voltage test leads and 6-foot power cord. Sloping front panel has handwheel which controls voltage. Made by **Cole Instrument Co.**, Dept. Q, 1320 S. Grand Ave., Los Angeles 15, Calif.

Mention Item NED-5230 when writing

CUTTER & WIRE STRIPPER

This triple-purpose Shearite hand tool will cut four most commonly used sizes of machine screws employed in electrical work and in addition will strip and cut electrical wire. Screw to be cut is threaded into tapped hole to desired length, and tool handles are closed. End of screw is sheared off clean and free of burrs without damage to threads. When tool is used as wire stripper, it will accommodate range of wire sizes from No. 22 to No. 10, and it operates on guillotine principle. Tool is fabricated of alloy steel, hardened for maximum performance and fitted with shockproof plastic handles. Information available from **Richard Renner Associates**, Dept. 1573, 315 S. Fifteenth Street, Philadelphia 2, Pa.

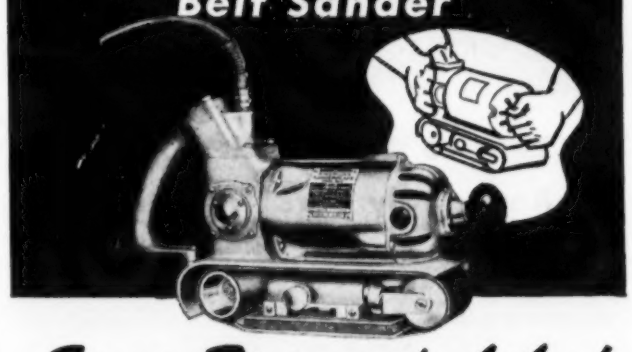
Mention Item NED-5231 when writing

DO YOU KNOW?

■ ALUMINUM has "arrived" as a bearing metal. This is result of recent accelerated tests in which 24ST aluminum alloy was used as clock plates to serve as pivot bearings of clock mechanism. Affording wearability as well as resistance to corrosion, aluminum clock plates effect reduction in overall weight. Material is easily fabricated and is adaptable to wide variety of designs and finishes. Research conducted by Reynolds Metals Co., 2000 S. Ninth St., Louisville 1, Ky.

Mention Item NED-5232 when writing

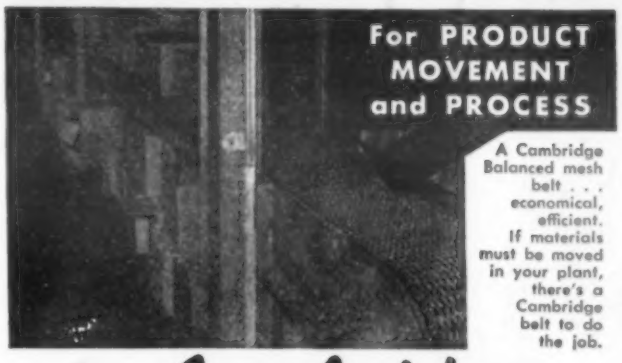
AMERICAN SANDERPLANE Belt Sander



Saves Time and Labor!

You can eliminate much hand sanding and hand planing in production or maintenance work . . . with an American Sanderplane Belt Sander! It's *ten times faster* than a plane . . . efficient on wood, metal, stone or marble. Has feather-weight micro switch . . . SKF ball bearings . . . quick belt changing mechanism . . . positive belt alignment . . . powerful heavy duty GE motor. Rugged . . . dependable . . . with or without dust collector. Write for details. American Floor Surfacing Machine Co., 524 So. St. Clair St., Toledo, Ohio.

Mention Item NED-5233 when writing



Cambridge WOVEN WIRE CONVEYOR BELTS

If your product or raw materials must MOVE . . . in production or process . . . there is a Cambridge design to meet your requirements. Years of experience in developing, designing and fabricating woven wire conveyor belts to overcome specific problems is your assurance that Cambridge engineers can solve your conveyor problem . . . Consult Cambridge engineers FIRST . . . there's one near you!

This valuable reference book is FREE. Shows many varied illustrations of Cambridge Conveyor Belts . . . gives engineering specifications . . . designs, construction details. Write today for your copy.

Cambridge WIRE CLOTH CO

Department C • Cambridge 7, Maryland

BOSTON • NEW YORK • BALTIMORE • PITTSBURGH
DETROIT • CHICAGO • SAN FRANCISCO • ST. LOUIS

Mention Item NED-5234 when writing

ANOTHER SPECIAL BY PROGRESSIVE

QUALITY PROMCO BRAND

CATALOG SHOWS DOZENS MORE

Special heads, threads and finishes on any metal or alloy adapted to cold upset. Weekly output: 25,000,000 pieces. Many specials, suggesting production savings for you, illustrated in latest catalog. Includes weights per 1M standard pieces, dec. equivs. of fractions, other purchasing and engineering helps. Write for Catalog 19.

The PROGRESSIVE MFG. CO.
46 NORWOOD ST. • TORRINGTON, CONN.

Mention Item NED-5235 when writing

Proved ACCURATE . . . Now AUTOMATIC Too!

HUPPERT 9A DeLuxe LABORATORY FURNACE

Complete Ready to Operate $182.00

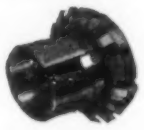
The highly accurate Huppert Model 9A DeLuxe is essentially the famous Huppert 9A Furnace with the addition of sensitive automatic control . . . making it the ideal furnace for practically any small batch or unit production. It automatically maintains any set temperature from 100° to 1950° F. Operates on 115 volt A.C. with load range from 600 to 2000 watts. Fully enclosed contacts, special alloy elements. All-steel construction, counter-weighted door. Removable porcelain tray. Dependable pyrometer. I.D. 6" x 6" x 6". O.D. 19" x 26" x 23".

All Stainless Steel Construction $222.00

K. H. HUPPERT CO.
6838 Cottage Grove Avenue, Chicago 37, Ill.

Mention Item NED-5236 when writing

Vibration SPECIALISTS



Standard Locknuts, Lockwashers and Adapters are *vibration-proof* devices for holding ball or roller bearings in place. Hard wear and tear cannot shake them loose, they are easily removed, and can be used again and again. Locknuts can be locked in a permanent and correct position by multi-prong Lockwashers.

Locknuts in sizes N-00 through AN-40 . . . Lockwashers (multi-prong type) in sizes W-00 through W-40. Write for Bulletin 27.

Adapter sizes 7-9-11-13, for shaft sizes 1 3/16" - 1 7/16" - 1 15/16" - 2 3/16".

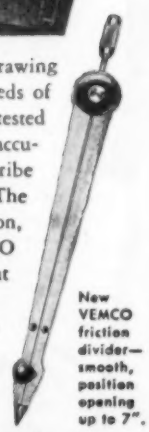
Standard
LOCKNUT & LOCKWASHER, INC.
311 N. CAPITOL AVE., INDIANAPOLIS 4, INDIANA

▲ Mention Item NED-5237 when writing ▲

NEW DRAWING SET
by the manufacturer of famous

Here's a new, streamlined set of the finest drawing instruments, specially designed to meet *today's* needs of draftsmen. The set incorporates VEMCO'S time-tested equipment, built for heavy service and continuing accuracy in either pencil or ink. The 2 compasses describe circles from 1/8" to 6½" and 10" respectively. The Microliner ruling pen gives effortless, handy action, while the friction divider, another exclusive VEMCO design, is a rigid, lightweight instrument without springback for rapid work.

Ask your dealer to show you one of these modern sets today, or write us for descriptive literature.

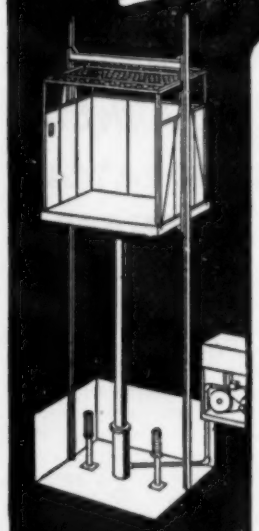


New VEMCO friction divider—smooth, position opening up to 7".

V. & E. MANUFACTURING CO.
PASADENA 20, CALIFORNIA

▲ Mention Item NED-5238 when writing ▲

Need a New ELEVATOR?

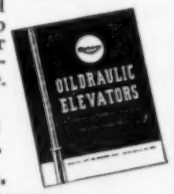


Elevator rises as oil is electrically pumped into jack. Descent by gravity.

Here's Your Best Buy For 2, 3 or 4 Stories

Oildraulic Elevators are designed for dependable operation at lowest cost. No penthouse or heavy load-bearing shaftway structure required . . . the powerful hydraulic jack pushes load up from below. Extremely smooth and accurate landing stops.

OTHER ADVANTAGES
Power used during rise only—economical. Compact electric power unit. Car sizes and capacities as required. All popular controls. Recommended for rises up to 40 feet. For freight or passenger service.



Write For Catalog RE-302
ROTARY LIFT CO.
1119 Kansas
Memphis (2), Tenn.

Rotary*
OILDRAULIC* ELEVATORS

*Reg. U. S. Pat. Off.

▲ Mention Item NED-5239 when writing ▲

ASBESTOS GLOVES

Continuous leather wearing surface over asbestos palm, fingers and thumb of this reinforced No. 225L Steel-Grip Safeguard gauntlet assures long life and full protection. There are no seams at normal points of contact with products or materials handled. Gloves are available either lined or unlined, and 11 or 14-inch lengths are standard. Special lengths can be furnished to order. Made by **Industrial Gloves Co.**, 555 Garfield Blvd., Danville, Ill.

▲ Mention Item NED-5240 when writing ▲

BOX OPENING DEVICE

Any box or carton can be opened quickly and cleanly by means of this Flash box opener. Since cutting blade penetrates exactly under outer cover thickness, it protects contents and permits reuse of container. Fabricated of a durable zinc, opener blade holder can be adjusted easily and rapidly to cut varying thicknesses of carton covers. Maximum protection is afforded worker. Made by **Flash Box Opener Co.**, 52 W. Houston St., New York 12, N. Y.

▲ Mention Item NED-5241 when writing ▲

QUICK-ACTING COLLET CHUCK

Designed to speed chucking operations on South Bend, Logan, Atlas and similar types of lathes, this Goodwin quick-acting collet chuck utilizes multiple leverage principle and cantilever action of hardened steel fingers to provide positive grip on material. Conveniently located control lever requires only finger-tip pressure for actuation, and quick-release feature makes possible secure chucking of work while spindle is in motion. Threaded nose cap can be removed easily to facilitate collet change, or it can be turned to adjust collet gripping pressure.

Chucks are available in 1-inch capacity unit to fit lathes having 1½-inch 8-thread nose spindle and 2-inch capacity model for fitting on any lathe spindle up to 3⅜ inches in size. Chuck capacity permits use of bar stock up to full diameter of spindle bore, and short pieces of even greater diameter can be handled. Made by **Goodwin Mfg. Co.**, 10 E. Broadway, Cuyahoga Falls 13, O.

▲ Mention Item NED-5242 when writing ▲

So Easy to Work With . . .
Amazingly Versatile—tufflex!

Here you see Tufflex—the war-born felted wood fiber blanket material—being cut to exact size and shape in a large Chicago plant. In any use, Tufflex is easy to work with—and its uses are multiple! For Tufflex is flexible, yet firm—resilient, yet tough. As protective padding, Tufflex is useful in packing or packaging furniture—delicate instruments—glass or glassware—appliances. As cushion padding, it is fabricated with ease and economy—can be fabricated or cut to any size or shape—is non-abrasive and non-irritating. High in insulating and sound-deadening qualities, Tufflex is available in moisture-resistant, moldproof and flameproof forms. For full information about Tufflex write Wood Conversion Company, Dept. 127-78, First National Bank Building, St. Paul 1, Minnesota.

TUFFLEX* MADE BY THE MAKERS OF *Balsam-Wool**

*REG. U. S. PAT. OFF.

▲ Mention Item NED-5243 when writing ▲

On your Flexible Tubing problems

The new, revised TITEFLEX catalog No. 113 is packed full of factual information on all types of TITEFLEX tubing, including our new monel, inconel, bronze and stainless tubing for high temperature applications. Write for your free copy of this helpful catalog—today.

Titeflex, Inc., 548 Frelinghuysen Ave., Newark 5, N. J.

Titeflex All-Metal Flexible Tubing

▲ Mention Item NED-5244 when writing ▲

HARLEY-DAVIDSON PERFORMS 110 SEPARATE OPERATIONS WITH WALKER-TURNER 20" DRILL HEADS

Walker-Turner Light Machine Tools solve dual problem for Harley-Davidson Motor Co., Milwaukee, in production of new lightweight motorcycles.

In Harley-Davidson set-ups, they fill the need for *standard machines* capable of handling 110 separate drilling (1/8" to 1" in dia., up to .001" accuracy), tapping and spot facing operations . . . *eliminate the need for replacing expensive, special machines when models change.*

Walker-Turner Machine Tools can also effect savings for you. *For complete catalog, write to Walker-Turner Co., Inc., Plainfield, New Jersey.*

View showing multiple set-up for machining motor, brake plate, and crank-case assemblies. 20" Drill Heads have 6" spindle travel, 5 standard spindle speeds. Price: less motor and column: Model D-1101X, Power Feed — $216.00; D-1100X Hand Feed — $135.00.

SOLD ONLY BY AUTHORIZED INDUSTRIAL MACHINERY DISTRIBUTORS 4205

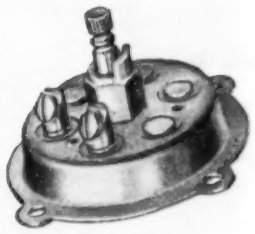
walker turner MACHINE TOOLS
DRILL PRESSES - HAND AND POWER FEED · RADIAL DRILLS
RADIAL SAWS · BAND SAWS - FOR WOOD OR METAL
RADIAL METAL CUT OFF MACHINES · MOTORS

▲ Mention Item NED-5245 when writing ▲

Get Accurate, Economical Temperature Control with

Klixon Thermo-Snap CONTROLS

C-8151-5 Non-Adjustable



C-3570-1 Adjustable

Built-in as an inherent part of a product, Klixon Thermo-Snap Controls give accurate temperature control at a cost usually lower than general purpose controls. Their snap-action actuating element "opens" the circuit with a quick, clean break . . . "closes" the circuit to a solid make. Their accurate operation is unaffected by motion, shock or vibration.

Klixon Thermo-Snap Controls are used in products ranging from soldering guns, ironing machines to dairy water heaters and electronic equipment. Write for bulletin PR116.

C-4910 Hermetically Sealed Thermostat for temperature regulation or high limit alarms in refrigeration and cooling applications.

KLIXON
SPENCER THERMOSTAT CO.
1907 FOREST STREET
ATTLEBORO, MASS.

▲ Mention Item NED-5246 when writing ▲

Increase Production of Fines by 300% with

STURTEVANT CENTRIFUGAL AIR SEPARATORS

Accurate Separation of Fines from 40 to 325 Mesh and Finer . . . Output Capacity from ¼ to 50 Tons Per Hour

Records prove that Sturtevant Air Separators cut separation costs of various materials by as much as 300%. In addition, they provide additional economies by reducing power costs up to 50%. That's why you'll find hundreds of these separators in all types of industries. Ruggedly constructed of quality materials, Sturtevant Air Separators keep on working day after day with minimum maintenance. They are available in many sizes from ¼ to 50 tons per hour output.

Investigate cost-cutting Sturtevant Air Separators for your plant. Write for catalog and information, today.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

Designers and Manufacturers of
CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS
MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

Mention Item NED-5247 when writing

WORLD'S QUICKEST WAY TO PULL GEARS AND WHEELS

The Nolan One-Man Gear and Wheel Puller

exerts a powerful, irresistible force that quickly, easily removes

Gears, Pinions, Wheels, Sheaves, Belt Pulleys, Fly Wheels, Truck Wheels, Propellers, Collars, Bushings, Drums, Bearings, Chain Sprockets, Vee Belt Drives

The Nolan Gear and Wheel Puller is adaptable to scores of pulling jobs. Simple to operate; does the job speedily, safely. Light, portable, easy to use in hard-to-get-into places. Free from all disadvantages of rigid-arm pullers. No extra attachments necessary.

One Nolan Puller will probably handle all gear and wheel pulling jobs you have. The double-end chains have grab hooks on one end for spoked wheels, and special close-grip hooks on the other end for use on solid wheels.

Keep a Nolan Gear and Wheel Puller handy around your place. It will pay for itself on the first job or two, in time, labor and money saved. Illustrated catalog if desired. SEND YOUR ORDER NOW!

NOLAN GEAR and WHEEL PULLER

No. 2. Most widely used for everyday jobs. Capacity 4 tons. Net weight 19 lbs. Complete outfit $21.50.

No. 4. For extremely heavy pulling jobs. Capacity 12 tons. Net weight 60 lbs. Complete outfit $45.00.

ORDER TODAY—PROMPT DELIVERY!

THE NOLAN COMPANY
128 PENNSYLVANIA ST., BOWERSTON, OHIO

Mention Item NED-5248 when writing

SUPERFINISHED I.D.'s of UNIVERSAL DRILL BUSHINGS wear longer— save you money

UNIVERSAL ENGINEERING CO., FRANKENMUTH 5, MICH.

Mention Item NED-5249 when writing

NEW *Processes* AND *Materials*

TEMPERATURE INDICATOR

Recommended for use in welding, forging, heat treating and fabrication of metals; molding of glass, rubber and plastics; and generally controlling temperatures

where workpiece is under observation, this Tempilstik is used in same manner as chalk. Each stick is rated for one temperature indication. For example, a 300-degree stick will make a liquid smear when drawn across a surface which is 300 F or higher and makes chalk-like mark if surface is below 300 F. Properly used, one stick will give up to 1000 determinations. It is available with ratings of 125 to 1600 F in increments of 12½ degrees up to 400 F and 50 degrees to 1600 F. Made by **Tempil Corp.** Dept. D, 132 W. 22nd St., New York 11, N. Y.

Mention Item NED-5250 when writing

METAL CLEANING COMPOUND

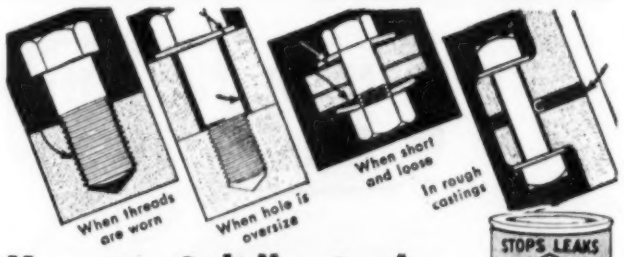
Wide variety of metals and alloys can be cleaned effectively by means of cleaner No. 21 and Calgon emulsion cleaner compounds which are used individually or in combination. Cleaner No. 21 is dry granular alkaline detergent for spray cleaning in metal-washing machines. It also can be used with emulsion cleaner for immersion cleaning in dip tanks and for heavy duty spray cleaning. Latter type is white creamy emulsion of an organic solvent in small amount of water, and it disperses readily when added to cleaning bath and aids emulsification. It rinses easily from metal surface with either hot or cold water, leaving no solvent or other film. Recommended temperature range is from 140 to 160 F, while cleaner No. 21 can be used effectively up to 180 F. Made by **Calgon, Inc.**, 321 Fourth Ave., Pittsburgh, Pa.

Mention Item NED-5251 when writing

MASONRY WATERPROOFING

Completely invisible after application, Crystal silicone waterproofing compound is applied quickly with either brush or spray. It penetrates any masonry surface and does not affect color or texture of bricks, concrete, stucco, artificial stone or other similar material. Coating permits masonry to 'breathe', yet all moisture penetration is stopped. Coverage is 200 square feet per gallon, and only single coat is required. Made by **Wurdack Chemical Co.**, 4973 Fyler Ave., St. Louis 9, Mo.

Mention Item NED-5252 when writing



How to Solidly Anchor LOOSE BOLTS

Bolts with worn threads—undersize bolts in oversize holes—bolts passing through thin walls—bolts holding ill-fitting cast flanges—all can be tightened firmly with quick-setting Smooth-On No. 1 Iron Cement. Use it, too, to lock nuts tight, and to cover and protect countersunk bolt heads in metal or wood. These repairs stay tight because Smooth-On expands slightly as it hardens. Buy Smooth-On No. 1 in 1-, 5- or 20-lb. size and keep it handy. If your supply house hasn't Smooth-On, write us.

50-293

FREE REPAIR HANDBOOK

40 pages filled with time-saving, money-saving repairs on plant, shop and home equipment made with No. 1 and other Smooth-On Cements. Drop us a line for YOUR free copy.

SMOOTH-ON MFG. CO., Dept. 10 G.
570 Communipaw Ave., Jersey City 4, N. J.

Do it with **SMOOTH-ON**
THE IRON CEMENT OF 1000 USES

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Detroit

ELECTRIC HOISTS
PNEUMATIC HOISTS
ELECTRIC TRAVELING CRANES

A type for every purpose. Quick operating, efficient material handling units.

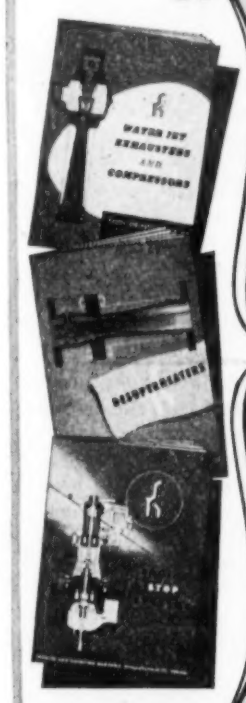
Give us an outline of your material handling problem. We will provide recommendations.

Ask for this bound set of bulletins on Detroit Hoists and Cranes

DETROIT HOIST & MACHINE CO.
8208 Morrow St.
Detroit 11, Mich.

Mention Item NED-5254 when writing

UP-TO-THE-MINUTE DATA ON SK



WATER JET EXHAUSTERS AND COMPRESSORS

SK Water Jet Exhausters provide an inexpensive and efficient means for priming pumps, evacuating closed vessels and pumping air. *New Bulletin 4-P* contains full details.

DESUPERHEATERS

SK supplies three types of desuperheaters—the Venturi Type, Surface Absorption Type and the Spray Type. *New Bulletin 6-D* tells all about them by use of functional drawings.

ENGINE STOP SYSTEMS

SK makes special designs for special requirements. *New Bulletin 8-D* tells how you can protect your engines through the use of an SK Stop System.

Keep up-to-the-minute on SK products by requesting copies of Bulletins in which you are interested. Write to

Schutte and Koerting Co.
1177 Thompson Street • Philadelphia 22, Pa.

Mention Item NED-5255 when writing

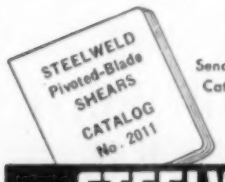
Ward Leonard Heavy Duty 105 Relays perform motor starting functions ordinarily assigned to larger relays. They assure long, trouble-free performance with continuous or frequent intermittent operation. Save weight, space and maintenance with Ward Leonard's mighty midget. Available in single or double pole. Write for complete information. Ward Leonard Electric Co., 51 South Street, Mount Vernon, N. Y. Offices in principal cities of U. S. and Canada. Resistors • Rheostats • Relays • Control Devices.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls

Mention Item NED-5256 when writing

PIVOTED-BLADE SHEAR
A Revolutionary Design!

Radically different from all other metal-cutting shears. Overcomes handicaps of ordinary guillotine-type shears. No slides or guides to wear. Many other important features. All sizes for metal to 1-1/4" thick or 18'-0" long.



Send for free copy
Catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO.
6607 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

▲ Mention Item NED-5257 when writing ▲

American MonoRail 5-Ton Twin-bridge Cranes with carrier mounted between the bridges, bring load clearance to uppermost limit for extreme low headroom operation. These 5-Ton cranes operate by cab or from floor by finger-tip control. Interlocking devices permit carrier to travel beyond craneways—loads are moved over maximum area.

An American MonoRail Engineer will be glad to discuss crane applications in low headroom areas regardless of type of handling.

SEND FOR BULLETIN C-1.
A 86-page book showing successful applications of American MonoRail Systems

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

▲ Mention Item NED-5258 when writing ▲

YOU CAN COUNT, WEIGH, BATCH, MEASURE, TEST FASTER... MORE ACCURATELY WITH A

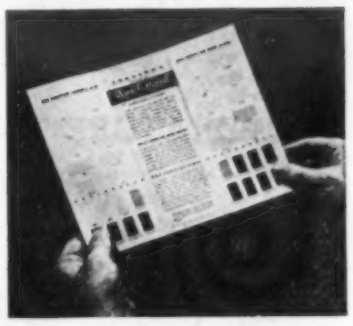
YALE LOAD KING SCALE

YALE THE YALE & TOWNE MANUFACTURING CO.
4530 Tacony Street, Philadelphia 24, Pa.
HAND LIFT AND ELECTRIC TRUCKS • HAND AND ELECTRIC HOISTS • SCALES

▲ Mention Item NED-5259 when writing ▲

New Processes & Materials

INTERIOR FINISHES



High luster, dirt resistance, smoothness and cleanability are features of Wax-Fortified interior finishes which are available in gloss, semi-gloss and eggshell flat types. Paints are particularly suitable for finishing walls, ceilings, machinery and equipment. Light gray and dark gray gloss paints conform to Association of Machine & Tool Manufacturer's standards. Actual percentage of light reflected by each of the available 34 colors and tints are shown in illustrated color card which is offered free by **S. C. Johnson & Son, Inc.**, Dept. NED, Racine, Wis.

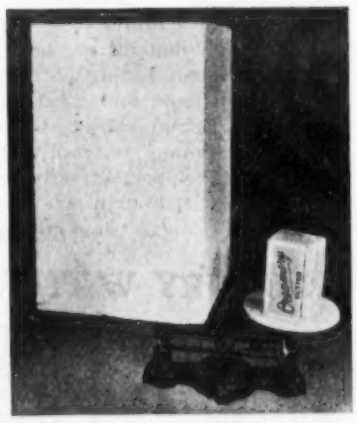
▲ Mention Item NED-5260 when writing ▲

FUEL OIL TREATMENT

Ameroid fuel oil treatment and sludge remover is combination of solvents, detergents and demulsifying agents which act together to prevent and remove all types of sludges and deposits encountered in use of industrial fuel oils. Treatment removes deposits in lines, strainers, preheaters, coils and burners. Sludge conditions are corrected in minimum time. Made by **E. F. Drew & Co.**, Dept. NE, 15 E. 26th St., New York 10, N. Y.

▲ Mention Item NED-5261 when writing ▲

PLASTIC INSULATING FOAM



Combination of exceptionally low thermal conductivity and extreme lightness in weight makes U. S. Flotofoam insulating plastic material suitable for application in shipping containers for fresh and frozen foods, home and commercial refrigeration units, and transportation refrigeration. It is adaptable also for flotation purposes, soundproofing, and for display and novelty uses. Material is noncorrosive, nontoxic and self-extinguishing. It will not support mold or bacteria growth and retains its insulating value over wide range of mean temperatures.

This snow-white foam is available in shredded or block form. In shredded form, it weighs from 0.8 to 1 pound per cubic foot and in block form, from 0.8 to 1.5 pounds per cubic foot. Blocks and slabs can be produced in variety of sizes and shapes to fill cavities or supplied surfaced with paper, cloth or resin coatings. Made by **United States Rubber Co.**, 1207 Rockefeller Center, New York 20, N. Y.

▲ Mention Item NED-5262 when writing ▲

CLIPPER MADE THIS CUT IN 9 SECONDS

NEWS FOR EVERY . . . CERAMIC PLANT

You'll be amazed how quickly and easily you can cut virtually any special length or shape from the hardest masonry materials. Clippers save time—save material, assure better workmanship on every job.

Model HD-48

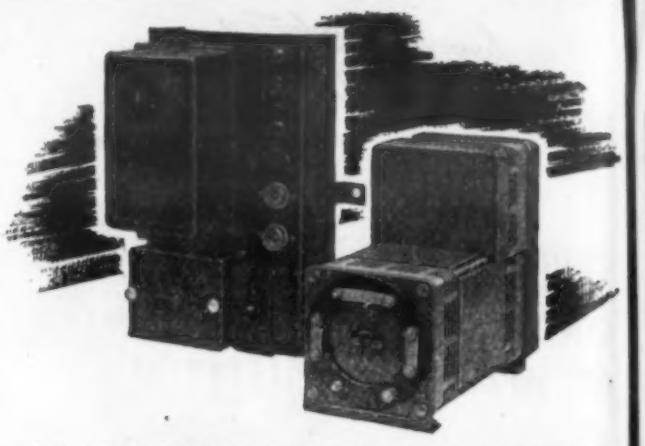
CUTS WET OR DRY

Dustless masonry cutting so fast and easy. Just turn on the circulating water system and slice through the hardest masonry materials. Foot Pedal control for varying material sizes or lock the cutting head at a set position, whichever is desired.

THE CLIPPER MFG. CO.
Warwick at 28th, Kansas City 8, Mo.
Philadelphia Cleveland St. Louis Austin, Tex.

YOU CAN TRY A CLIPPER
FREE
WRITE FOR LITERATURE

▲ Mention Item NED-5263 when writing ▲



FOR AUTOMATIC, DEPENDABLE, ACCURATE VOLTAGE REGULATION
OF LOW VOLTAGE CIRCUITS

This is the G-E automatic Inductrol with its control panel. Absolutely stepless, it gives micrometer-fine regulation with auto-transformer efficiency. It provides an inexpensive method of securing an accurate, constant voltage for industrial and electronic applications where line voltages vary. Maintenance is negligible—Inductrols have no brushes to wear out.

They are available for use in single-phase 120-volt and 240-volt circuits rated 6 KVA and below. Voltage ranges of 10% or 15% raise and lower can be provided.

For providing a variable output voltage from a relatively constant supply voltage, G-E Inductrols are also available in hand- or motor-operated types. Write for Bulletin GEA-4508. *Apparatus Dept., General Electric Co., Schenectady 5, N. Y.*

GENERAL ELECTRIC
404-55

▲ Mention Item NED-5264 when writing ▲

Molded Plastic Parts of this type are *Duck Soup* FOR BOONTON

Housing Molded by Boonton for Bendix Radio

Have You a Production Problem that Molded Plastics Might Solve?

Just for a moment, let your thinking wander beyond the radio housing illustrated above. Sure, we mold plastic radio cabinets, but perhaps your products call for another kind of housing—such as for a business machine, an appliance, or some other type of equipment.

If so, it will pay you to consider Boonton. We're fully equipped to mold the housings, parts, or products you need, in medium or large-sized runs from the best-suited raw plastic material, by one of the 4 major molding processes: straight compression, transfer, plunger, and injection.

Many of our customers have saved substantial sums of money by asking our engineers to talk to their engineers before their products reached the purchasing stage. They've been amazed and pleased at the ways we've come up with design and production suggestions that shaved costs all the way around. Perhaps we can do the same for you. Write or phone the Boonton Molding Company, Boonton 8, N. J., BOonton 8-2020.

SEND US YOUR BLUEPRINTS OR SAMPLES

We'll tell you whether the parts you want can be plastic molded, and if they can, how much it will cost. Be sure to include full data on conditions of application or use, initial quantities needed, annual requirements, and delivery date.

Boonton

MOLDERS OF MOST PLASTICS BY MOST METHODS

▲ Mention Item NED-5265 when writing ▲

INCREASE PRODUCTION —CUT COSTS in Baking, Drying, Annealing and similar Applications

CHROMALOX Electric OVEN HEATER ASSEMBLIES

• ECONOMICAL • EASY TO INSTALL

Dependable year-in and year-out performance at maximum efficiency and low operating costs are yours when you use CHROMALOX Electric Oven Heaters in your plant for drying, baking, dehydrating, finishing and similar applications. Even heat and exact temperature control insure peak production with minimum product rejects.

Get the full details NOW!

Send for Catalog 42 and "100 Ways to Apply Electric Heat" booklet which show Chromalox Oven Heaters at work.

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

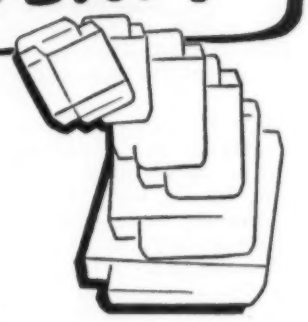
See other advertisement on page 4.

CHROMALOX IB-73

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ Mention Item NED-5266 when writing ▲

IMMEDIATE DELIVERY!



40 Stock Sizes.
Tuck end tough kraft.
Stocked for immediate shipments.
Sizes range from 1/2 x 1-7/16 inches square to 2 x 7-1/4 inches.
Special cartons, plain or printed, made to your specifications.

•

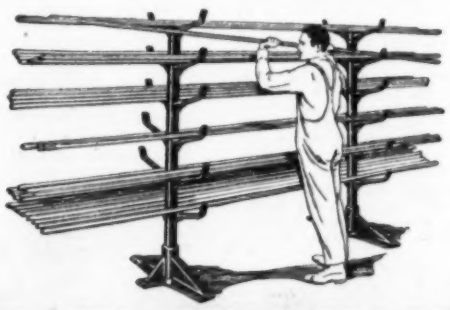
Tags in all grades and colors to your order, printed, numbered, or plain.

Campbell BOX AND TAG CO.
Main & Equipment St.
South Bend 23, Indiana

▲ Mention Item NED-5267 when writing ▲

—WANT QUICK SERVICE IN YOUR STOCK ROOM?

The BROWN SECTIONAL RACK saves the time previously lost in end-hauling each bar of stock its entire length from the old-style, closed-side Rack, the Brown Rack requiring but a few inches of side movement. Each length, width and thickness of stock is displayed in goldfish visibility for instant selection. Workmen waiting for stock are served without waste of time. Any time you require additional storage space, all you need do is add more units. If you want to relocate it at any time, you can do so quickly for it is unattached to the building. It is a simple, durable article made of metal in five styles. It can't burn up, warp, sag, or twist; depreciation is practically nil. SEND FOR BULLETIN NO. 26-D DESCRIBING THE BROWN SECTIONAL RACK.



BROWN ENGINEERING CO.
129 NORTH 3RD ST. READING, PENNA.

▲ Mention Item NED-5268 when writing ▲

New Processes & Materials

PHTHALIC RESIN

Comparatively low-cost, high-phthalic content Aroplaz 1379-2 resin is suitable for use in many types of air-drying and low-temperature baking finishes and can be supplied in quantity. Material provides excellent performance in toy enamels, hardware and machinery finishes, industrial metal primers and farm implement enamels. It is usable also in priming, surfacing and finishing coats for wood, in automotive enamels and as general utility vehicle. Finishes will air-dry overnight or bake hard in 1 hour at 200 F. Color retention is good, and resin provides better-than-average flexibility and durability. Made by **U. S. Industrial Chemicals, Inc.**, 60 E. 42nd St., New York 17, N. Y.

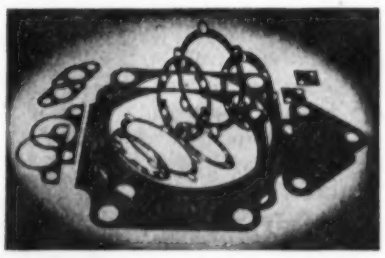
▲ Mention Item NED-5269 when writing ▲

SEAM WELDING ELECTRODE

High conductivity, hardness and resistance to annealing make Mallory No. 22 resistance welding alloy a versatile electrode for use in seam welding of coated metals such as galvanized iron and terne plate as well as ordinary carbon steel. Electrode is compounded of high conductivity copper base alloy which contains cadmium and zirconium. It is available as forged blanks or finished machined wheels in variety of sizes. Made by **P. R. Mallory & Co.**, 3027 E. Washington St., Indianapolis 6, Ind.

▲ Mention Item NED-5270 when writing ▲

STANDARD SHIM SETS



Standard shim sets which can be furnished in any shape or size or with any arrangement of bolt holes to meet user's needs consist of one 0.020, three 0.005 and three 0.007-inch thick shims. Individual sets provide for unlimited arrangement of thicknesses and are fabricated of steel, copper, brass or Monel as well as other ferrous and nonferrous materials.

Individual shims can range in thicknesses from 0.001 to 0.25-inch, and overall dimensions can range from ⅜-inch to 6 feet in shapes to suit specifications. Tolerances are held to 0.015-inch. Shim sets are recommended for use in original fabrication, repair or adjustment. Made by **U. S. Gasket & Shim Co.**, Dept. No. 3, 203 Hibbard Bldg., Cuyahoga Falls, O.

▲ Mention Item NED-5271 when writing ▲

NEW-BAKER 1000 lb. ELECTRIC FORK TRUCK

only $2838 including BATTERY and CHARGER
(Truck with battery only $2488)

● Narrow aisles, limited floor-loading capacity, congested areas, small and low-capacity elevators no longer need deprive plants of the advantages of mechanized handling with electric fork trucks. Designed to meet these specific problems, this new truck finds application wherever loads may be limited to 1000 lbs. Its low price makes it possible to use fork trucks and pallets on many applications for which the cost of equipment, in the past, was not justified. Total weight with load 3805 lbs.

Also available for capacity of 1500 pounds, 30" long, for $150.00 extra.

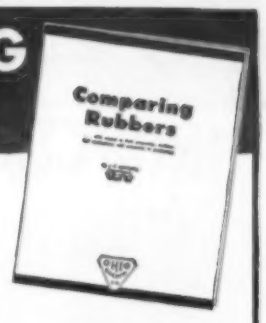
For complete information get in touch with your nearest Baker representative or write us direct.

BAKER INDUSTRIAL TRUCK DIVISION
of The Baker-Raulang Company
2179 West 25th Street • • • Cleveland, Ohio

Baker INDUSTRIAL TRUCKS

▲ Mention Item NED-5272 when writing ▲

COMPARING RUBBERS



A Special Report For Product Designers

● Although prepared primarily for product design and development engineers, the information in a new bulletin "COMPARING RUBBERS" should prove helpful to others interested in applications of mechanical rubber parts. Contents include comparisons of the physical properties, mechanical applications, and production economies of natural rubber, reclaim rubber, and various kinds of rubber-like materials. Examples of applications are illustrated. Information on the advantages of injection and transfer molding processes is included.

The author, J. F. McWhorter, research engineer, is a member of The Ohio Rubber Company's staff of specialized engineers in the field of mechanical rubber. The new bulletin "COMPARING RUBBERS" will be sent to you upon request on your company letterhead.

THE OHIO RUBBER COMPANY
587 BEN HUR AVE., WILLOUGHBY, OHIO

▲ Mention Item NED-5273 when writing ▲

One Man DOES THE WORK OF Two!

Use MYSTIK TAPE on the production line as a holding tool . . . holding parts in place, holding assemblies together. Then *both* this man's hands are free to work faster, quicker, more efficiently. Keep MYSTIK handy and he'll use it hundreds of times daily!

MYSTIK goes on fast, grips like a bulldog, yet strips off quickly, easily, cleanly —leaves the finest finish unharmed and completely free of residue.

FREE—Big trial sample roll of MYSTIK Self-Stik CLOTH TAPE and literature pointing out its many problem-solving production uses. Write—Mystik Adhesive Products, 2657 North Kildare Avenue, Chicago 39, Illinois.

MYSTIK Self-Stik ADHESIVE PRODUCTS

▲ Mention Item NED-5274 when writing ▲

Test Viscosity

Where it Counts the Most
When it Counts the Most
at Point of Process!
WITH A
BROOKFIELD SYNCHRO-LECTRIC VISCOMETER

At last, Point of Process Viscosity readings are not only practical, but simple, rapid, and accurate as well. The Brookfield Viscometer is portable and plugs into any ordinary electrical outlet Operation is completely automatic and readings are given directly in centipoises.

ONLY A BROOKFIELD HAS ALL THESE ADVANTAGES
● Portable — use in lab and plant ● Rapid — readings in 30 seconds ● Accurate — within 1% of range ● Simple — no technical knowledge to operate or to read ● Rugged — built to take plant handling without getting out of order.

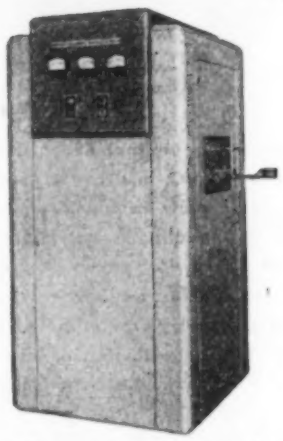
BROOKFIELD ENGINEERING LABORATORIES, INC.
230 Porter Street, Stoughton, Mass.

Please send me your new 8 page booklet describing and illustrating the various Brookfield Models and their uses.
Name .....
Company .....
Address .....
City ..... *State* .....

▲ Mention Item NED-5275 when writing ▲

A Better Job Faster 5 Ways With New Wide Line of

INDUCTION HEATERS



Here's Proof!

Heating time was 40 sec. Now 18 sec.
Soldering time was 30 sec. Now 10 sec.
Brazing—8 fittings simultaneously in less than 1 min.
Hardening—Up to 2250 textile trimmer blades per hr.
Annealing—Exact forming area stress relieved prior to final forming.

A 2478

A-C's NEW complete line of industrial electronic equipment—widest ever offered—includes eight sizes of induction heaters from 1 through 200 kw. You can obtain increased production, more accurate control, speedier operations at lower unit cost with A-C induction heaters. Send for literature today.

ALLIS-CHALMERS
MILWAUKEE 1, WISCONSIN

Mention Item NED-5276 when writing

One man can do the work of THREE with a Parker floor sweeper

- Efficient
- Dustless
- Very Easy to Operate

Actual savings of from 1 to 3 men's wages have been accomplished by users of the Parker Floor Sweeper. It has nothing to be dragged behind nor does it pile up dirt that requires time consuming pick up, it cleans thoroughly as fast as a man can walk. All the debris is brushed right into the removable dust-proof hopper for easy disposal. It tackles all kinds of floors and all types of materials. Lightweight aluminum construction throughout—mounted on semi-pneumatic tires.

Write for details

PARKER PATTERN & FOUNDRY CO.
220 BECHTLE ST., SPRINGFIELD, OHIO
"PARKER"—*The original name in lawn sweeping*

Mention Item NED-5277 when writing

BURGESS SNUBBERS - BURGESS SNUBBERS

is a BIG NOISE your Big problem?

Noise—from the intake or exhaust of a Diesel engine, compressors, or blower—will not be tolerated by neighbors of your plant. You can avoid it easily by installing the right size Burgess Snubber.

Burgess Snubbers smooth out any pulsating gas flow—the real source of noise. They can save your noise complaints, and may improve engine operation at the same time. Write for information.

BURGESS-MANNING COMPANY
749-R EAST PARK AVE., LIBERTYVILLE, ILL.
Please send me information on Burgess Snubbers.
☐ Air Intake ☐ Exhaust
Name.....
Company.....
Address.....
City.....State.....

Mention Item NED-5278 when writing

New Processes & Materials

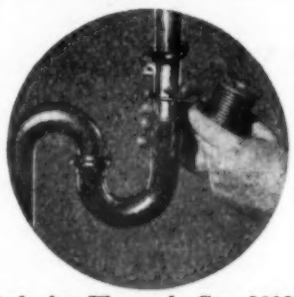
FLOOR CLEANING MATERIAL

When diluted with 20 parts of water, 1-gallon of Johnson's Floor Cleaner will loosen old wax and dirt over area of approximately 20,000 square feet. Compounded of soaps and detergents, cleaner penetrates and loosens wax and dirt so that they can be floated away by rinsing. Easy to use, material is first diluted with hot water and then applied to surface with mop, cloth or sprinkling can. Several minutes after application, residue can be washed away by rinsing or mopping with clear water. Cleaner is applicable for use on all types of floors including asphalt, rubber tile, linoleum, wood and terrazzo. Made by **S. C. Johnson & Son, Inc.**, Dept. NED, Racine, Wis.

Mention Item NED-5279 when writing

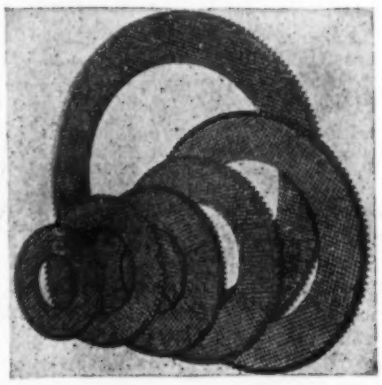
SELF-FORMING PACKING

Withstanding hot and cold water, steam, air, gas, brine, ammonia and other mild chemicals, this Plumbers' Special self-forming metallic packing is self-lubricating material and is supplied in ½-pound spools. Piece of proper length to encircle pipe is cut off and placed around pipe, and coupling nut is tightened. Material serves equally well on mixing faucets, line and radiator valves, spigots, jiffy joints or any fitting where packing or washer is required. Its use eliminates need for sized washers. Made by **Flexrock Co.**, 3603 Filbert St., Philadelphia 4, Pa.



Mention Item NED-5280 when writing

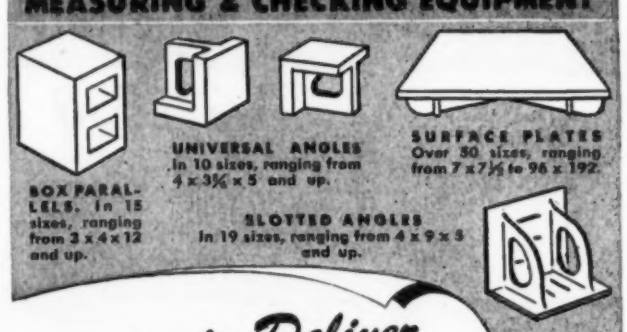
ASBESTOS CLUTCH FACINGS



Developed to meet service requirements of heavy industrial equipment, improved asbestos clutch facings maintain high frictional efficiency over wide temperature range. Facings feature balanced combination of molded and woven asbestos structures and can be furnished in plain disk type or with integrally molded teeth. Units are recommended for application on excavating, road building, construction and oil field equipment. Made by **Gatke Corp.**, 228 N. La Salle St., Chicago 1, Ill.

Mention Item NED-5281 when writing

Dependable MEASURING & CHECKING EQUIPMENT



Ready to Deliver

Send for Complete Catalog

STRAIGHT and OFFSET TYPE HAND WHEELS

STANDARD CAST IRON HAND KNOBS

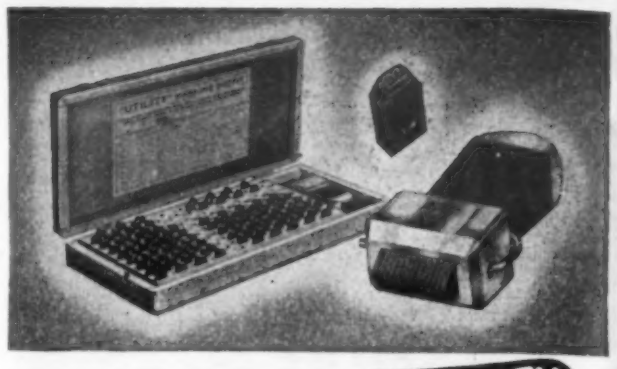
SOLID ROTARY
MACHINE HANDLES

MALLEABLE IRON LEVERS

We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
6771 E. McNichols Road • Detroit 12, Mich.

Mention Item NED-5282 when writing



THE NEW SAFETY "UTILITY" MARKING OUTFIT

Holder Holds Nine Sizes of Type From 1/32" to ¼"

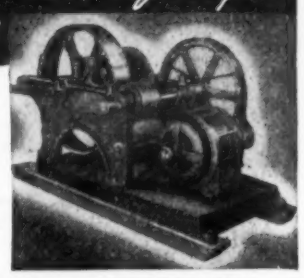
Designed for light stamping work, the "Utility" outfit is ideal for marking etched plates, tags, keys, stock checks; brand names or stock numbers on steel bars; special coding, serial numbering, identification, inspection and other marking where two or more characters are required.

Send for Literature and Prices

M. E. CUNNINGHAM CO.
SAFETY STEEL STAMPS
151 E. CARSON STREET PITTSBURGH, PA.

Mention Item NED-5283 when writing

For easy, low-cost lifting...
MASON WHIP HOIST



In 3 capacities, 500 to 1500 pounds, Mason Whip Hoists can be preset for speeds varying from 75 to 400 feet per minute.

Here is a hoist that lifts baled, bagged, boxed or tied merchandise—as much as 1500 pounds as high as 50 feet in as little as 10 seconds . . . higher lifts proportionately.

At only a fraction of the installation and operating costs of other types of equipment, Mason Whip Hoists use outside space or small hatchways, lift loads quickly and safely, and can be operated by any workman. Two men can shift loads directly from truck or car to storage floors, handling as much as 90 units per hour. Mounted in a penthouse, on a storage floor or suspended from the ceiling, Mason Whip Hoists save space, time and labor—handle bulky loads easier and faster.

Write for details and prices—see how easily-installed Mason Whip Hoists can help solve your hoisting problems.

REPAIR PARTS FOR MASON WHIP HOISTS AVAILABLE

PAWTUCKET
MANUFACTURING COMPANY
327 PINE STREET, PAWTUCKET, R. I.

Mention Item NED-5284 when writing

IF YOU USE BOTH A-C AND D-C WELDING...

YOU CAN REDUCE YOUR ELECTRODE INVENTORIES

Westinghouse FLEXARC ELECTRODES
Produce High-Quality Welds—A-C or D-C

Why buy electrodes suitable for d-c only, or for a-c only, when Westinghouse Flexarc Electrodes will do the job with either? In almost every instance, one Flexarc Electrode can fill your needs where two would ordinarily be required.

Whether your welding is a-c or d-c, or both, make Westinghouse your electrode headquarters—select your requirements from the most complete line on the market today.

Immediate delivery, from stock, can be had on most types.

See your Westinghouse representative. Westinghouse Electric Corporation, Pittsburgh, Penna.

Westinghouse FLEXARC ELECTRODES include:

For Mild Steel—6 popular types
For Cast Iron—machinable and nonmachinable types
For Low Alloy Steels—3 types, for cast steel and high tensile rolled steel
For Stainless Steels—27 types to meet particular needs
For Hard Surfacing—10 different electrodes, for various requirements

Plus the new Grade 18 Sulcoat Finish Electrode for general-purpose steel welding

And the new Flexarc LoH (Low Hydrogen) Electrode which eliminates "underbead cracking"

J-21440

Westinghouse ELECTRODES
FOR SUPERIOR WELDING

Mention Item NED-5285 when writing

MOTO-TRUC

PALLET, PLATFORM and HI-LIFT TRUCKS.

Roller Type Handle. Turn in Direction of Travel.

Push Buttons for Lifting and Lowering.

SIMPLEST AND EASIEST CONTROL

The Choice of Materials Handling Engineers

12-VOLT PALLET TRUCK with patented Hydegger wheels

Two speeds forward and reverse by a twist of the wrist. Shorter overall length by 11" or more. Operates in narrower aisles, etc.

Low line of gravity—no tipping. All welded steel construction.

ALL THE ADVANTAGES IN BULLETIN 47-A. Write for it.

THE MOTO-TRUC CO.
1953 E. 59th Street
Cleveland 3, Ohio

Originators of MOTORIZED HAND LIFT TRUCKS

Mention Item NED-5286 when writing

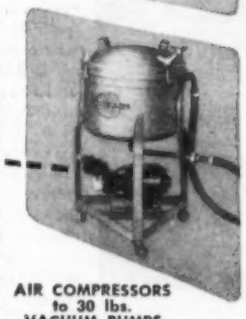
THEY MADE AIR DO THE WORK through Visioneering*

On a HUMIDITY CONTROL UNIT

Here's Visioneering by designers of a Humidity Control Unit for bakery proof-rooms. To atomize water a Gast Rotary Compressor, as original equipment, supplies "pulseless" air pressure. Unit holds room air at 98% humidity. Direct drive, ¾ H.P. Rating is 8½ C.F.M., pressure to 25 lbs.

On a FILTER FOR EDIBLE FAT

On a totally different application, air does the work on another manufacturer's Portable Filter. With pressure to 25 lbs., a Gast Compressor forces fat through filter. Gast Compressor and motor are integral—only 7" x 12". Rating: 1½ C.F.M. with ¼ H.P.



BOTH USE GAST ROTARY AIR COMPRESSORS

The two machines above are totally unlike, although both serve in processing food. Yet they were visioneered as better products—with Gast Rotary Compressors.

Can you improve product performance—reduce bulk—or increase safety—through visioneering? Many designers have with Gast Rotary Design Compressors, Vacuum Pumps or Explosion-proof Air Motors as original equipment. For details and engineering help, write Gast, describing your problem.

*Broad vision plus engineering skill.

AIR COMPRESSORS to 30 lbs.
VACUUM PUMPS to 28 in.
AIR MOTORS to 1 H.P.

WRITE TODAY! Request your copy of this IDEA-CATALOG.

GAST ROTARY AIR MOTORS COMPRESSORS VACUUM PUMPS

GAST MANUFACTURING CORP.
115 Hinkley St. • Benton Harbor, Mich.

Mention Item NED-5287 when writing

How Do You

Tag Your Patterns?

IT'S simple and easy to tag your valuable patterns with the Hansen one-hand Tacker. Tack tag onto wood patterns, or on wood shelf if metal pattern. Protect your pattern investment.

This is but one of many uses for Hansen. It drives tackpoints fast as you grip—for assembly, shipping, etc.

Save time. Speed up production. Cut costs. Tackers in 36 models. Staples in 80 sizes.

REQUEST FOLDER

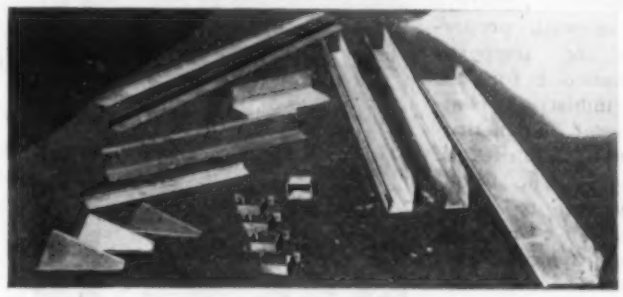
A. L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE.
CHICAGO 40, ILL.

Mention Item NED-5288 when writing

New Processes & Materials

CORROSIONPROOF ROOFING

Extremely corrosion-resistant Monel sheet for industrial plant roofing purposes has low coefficient of expansion, high rigidity and resistance to fatigue cracking and is



unaffected by sudden temperature changes. Material is utilized also in fabrication of gutter sections, step flashing, leader straps, cap flashing, etc. where roofs are exposed to corrosive atmospheres and salt air. Material is soft in temper and lends itself to various bending, forming, seaming and soldering operations required for roofing purposes. Available in standard roofing thicknesses, sheet can be applied to most types of roof construction. Made by **International Nickel Co.**, 67 Wall St., New York 5, N. Y.

Mention Item NED-5289 when writing

FLOOR ENAMEL PRIMER COAT

Applicable to concrete or wood floors which are subjected to hard wear and severe traffic conditions, Rubber-Coat Traffic Primer is colored penetrating silicated rubber-base undercoating material. It can be brushed onto surfaces to be treated prior to enameling or used by itself as skidproof coating. Tests with Taber Abrasor indicate coating has excellent abrasion resistance. It can be supplied in variety of colors to harmonize with any color scheme. Made by **Wilbur & Williams Co.**, 43 Leon St., Boston 15, Mass.

Mention Item NED-5290 when writing

CABLE PROTECTIVE WRAPPING

Developed to protect lead sheathed cables in manholes, No-Ox-Id Wrap is fabricated of corrosion-resistant coating and sturdy wrapper and is furnished in adhesive roll. Material is 1/32-inch thick by 2 inches wide and rolls carry 25 feet of wrapping. One man can apply protective wrapping by manually winding it spirally around cable with ½-inch overlap. Corrosion-inhibitive qualities provide protective film which keeps cable from pitting. Material is water repellent. Made by **Dearborn Chemical Co.**, 310 S. Michigan Ave., Chicago, Ill.

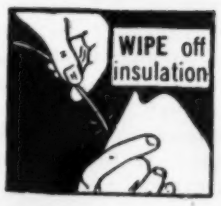
Mention Item NED-5291 when writing

SOUND DEADENING MATERIAL

Fiberglas blankets, composed of superfine glass fibers with average diameters of 0.00011-inch bonded with thermosetting resin, are available for quieting self-contained air conditioning units. Installed in interior of equipment and its adjacent plenum chamber, blankets help absorb sound waves before they reach ducts. They will not support combustion, and their moisture absorption is less than 1 per cent by weight. Blankets are cut to size as easily as paper. Material is available in ½ and 1-inch thicknesses in rolls 54 inches wide and 25 or 50 feet long. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

Mention Item NED-5292 when writing

WIRE STRIPPING LIQUID



Wire stripping formula No. 21 liquid removes Formex, Formavar, enamel and similar types of wire insulating coatings. Wire to be stripped is dipped into liquid and wiped with rag. Insulation is removed without use of scraping tools or special cleaning. Compound is noncorrosive, noninflammable and will not harm fabrics, wood or metal. It is available in 2-ounce bottles and 1 and 5-gallon cans and is applicable for use in mass production as well as for repairs on electrically wired equipment. Made by **Aircraft Marine Products, Inc.**, 1573 N. Fourth St., Harrisburg, Pa.

Mention Item NED-5293 when writing

BERGER VERTICAL STEEL FILES

FOR FACTORY OFFICE, SHOP, WAREHOUSE and GENERAL FILING

Designed and built for easy, efficient operation. Sturdy reinforced construction stands up under long, hard use. Case and drawer members electrically welded to form rigid, one-piece units. Interchangeable drawers coast on hardened roller bearings. Attractive in olive green, platinum gray, walnut and mahogany finishes with polished hardware.

All grades and types now available . . . Write for complete information and prices.

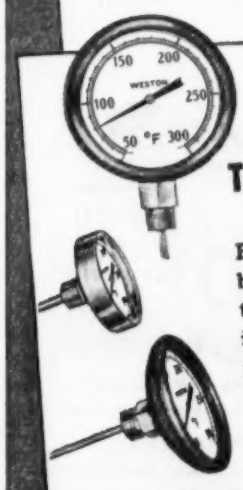
BERGER MANUFACTURING DIVISION
REPUBLIC STEEL CORPORATION • • • • CANTON 5, OHIO

Mention Item NED-5294 when writing

New HUMIDITY INDICATOR by Weston

- Quick-reading
- Convenient
- Accurate

Simplified Slide Rule Calculator gives relative humidity readings directly—eliminates charts and tables. Entire unit ruggedly constructed of metal, including the two Weston dial-type thermometers, providing readings accurate to ±1% for general conditions.



WESTON ALL-METAL THERMOMETERS

Featuring readability, reliability and rugged construction. Available in models for industrial applications in required stem lengths and ranges; also models for laboratory use.

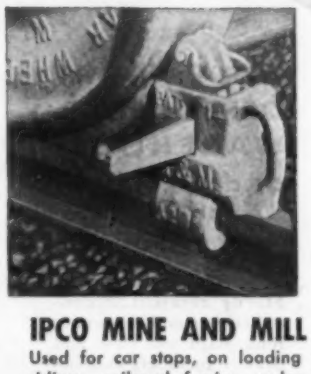
Available through distributors, or consult your local WESTON representative.

WESTON Instruments

Weston Electrical Instrument Corporation
663 Frelinghuysen Avenue, Newark 5, N. J.

Mention Item NED-5295 when writing

The Safe Way!



IPCO

IPCO MINE AND MILL RAIL CLAMPS

Used for car stops, on loading platforms, temporary sidings, railroad ferries, under tipples, for cars on grades and traveling cranes.

Light in weight. Easy to handle. Applied or removed in a minimum of time. Guaranteed against breakage.

Used and recommended by leading steel companies, manufacturing plants, mines, grain elevators, cement plants and quarries.

Write For Bulletin L-78

IPCO Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY

2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

Mention Item NED-5297 when writing

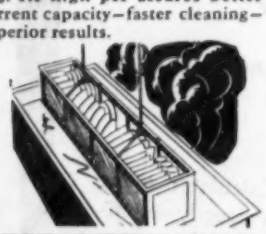
LOOK

how scientific cleaning through pH control

SAVES TIME, WORK, MONEY

1. For Plating Die Castings

Kelite No. 41 is a new development for cleaning die castings, brass castings and stampings, Brittania or German Silver before plating. Its high pH assures better current capacity—faster cleaning—superior results.



2. Superior Electro Cleaning

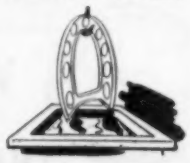
Famous Kelite Anodyne gives best assurance of lustrous, smoothly adherent plating. Forces its way into recesses of the metal, removing all oils, graphite, etc. High conductivity for faster anodic cleaning.

3. Fast Core Box Cleaning

Foundries all over the country have found a new way to clean stubborn deposits on core boxes and driers—Kelite Formula 555. No need at all to use hand labor...just soak in Formula 555—then rinse with water.

4. For Best Paint Adhesion

Kelite Process K is unexcelled for preparing iron, steel, copper, and aluminum for painting. Removes rust and phosphatizes ferrous metals to inhibit rerusting. Brightens copper. Wipe on—Wipe off... or use immersion process!



"KELITE" REG. U.S. PAT. OFF. • pH CHART COPYRIGHTED 1942 BY KELITE PRODUCTS, INC.

KELITE Control

KELITE

SCIENTIFIC CLEANING THROUGH pH CONTROL

Industrial Chemicals for Cleaning & Processing • Manufacturing Plants in Los Angeles, Chicago, Dallas • Offices in principal cities

FREE SAMPLES—DEMONSTRATIONS

See for yourself how these and other Kelite Cleaning Materials can do a better job for you. No cost or obligation. Just send coupon.

KELITE PRODUCTS, INC.

P.O. BOX 2917 — TERMINAL ANNEX, LOS ANGELES 54, CALIF.

I am interested in free ☐ SAMPLE ☐ DEMONSTRATION for:

Cleaning for Painting ☐ Better Anodic Cleaning ☐
Cleaning Die Castings ☐ Cleaning Core Boxes ☐
Other _____ ☐

Name _____

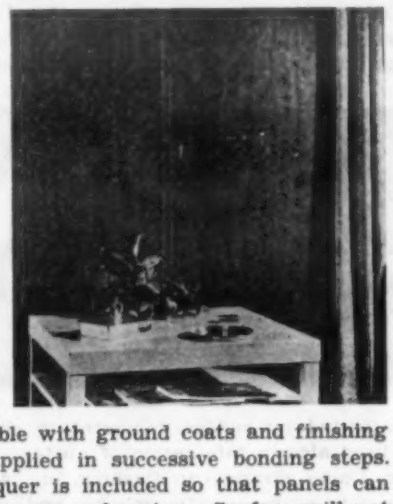
Company _____

Street _____ City _____

Mention Item NED-5298 when writing

New Processes & Materials

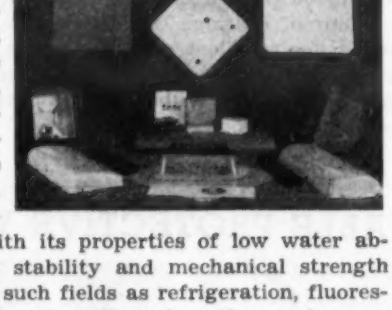
WOOD-GRAINED WALL PANELS



Wood-grained Ser-Wall panels combine durable, decorative surface finish with properties of tempered Presdwood for use in industrial, commercial and institutional applications. Realistic wood-graining is made possible through lithographing operation using specially compounded ink which is compatible with ground coats and finishing materials that are applied in successive bonding steps. Coating of clear lacquer is included so that panels can be cleaned with mild soap and water. Surface will not peel, chip or crack. Panels are available in sizes from 16 x 72 inches to 48 x 96 inches in ⅛-inch thickness. Edges are beveled and borders are scored so that panels can be butted together and nailed in score lines. Finishes available are cross-fired figured walnut and bleached walnut. Price is approximately 33 cents per square foot. Made by **Woodall Industries, Inc.**, Service Products Div., 2035 Calumet Ave., Chicago 16, Ill.

Mention Item NED-5299 when writing

PLASTIC SHEETING



Developed for making comparatively low cost transparent containers, Styron sheet material is available in thicknesses of 1/16, 3/32, 1/8 and 3/16-inch in clear and opaque types in wide range of colors. Economy of this plastic sheet together with its properties of low water absorption, dimensional stability and mechanical strength make it applicable in such fields as refrigeration, fluorescent lighting, display, aircraft, automotive and many others. All general machine shop practices can be used in fabricating sheet. Made by **Willson Magazine Camera Co.**, Plastics Div., 6022 Media, Philadelphia, Pa.

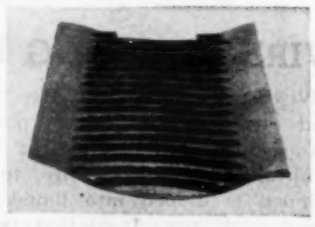
Mention Item NED-5300 when writing

PROTECTIVE FINISH

Providing economical, bright, durable, protective finish, Liqui-Plate is baked aluminum monolacquer. It can be used on heavy metal production parts, steel wall panels, pipe fittings, railroad cars, trucks, toys and kitchen cabinets and as interior or exterior decorative trimming. Paint can be applied to any clean ferrous surface whether or not it has phosphate coating. Material can be applied by spray, dip, flow or roller coating methods. Variations of coating are available to meet specifications of any special temperature or time cycle, whether baking is accomplished by infrared or atmosphere ovens. It is furnished in 5-gallon pails or 55-gallon drums. Made by **Multi-Coat Corp.**, 26 Bedford Glenns Rd., Bedford, O.

Mention Item NED-5301 when writing

RIBBED-TOP CONVEYOR BELT



Chevron-shaped cross ribs on top surface of this conveyor belt make it particularly applicable for handling sand and gravel, wet-mix concrete, gold dredgings and other 'soupy' materials up steep inclines. Cross ribs 1/4-inch higher than belt surface prevent 'back-slipping' of material being elevated. Ribs serve as barriers also to trap water and prevent backwash of materials on inclines up to 20-degree angle. Ribs increase belt life as they reduce frictional wear to minimum. Overlapping of close-spaced ribs assures smooth return run over belt idlers. Belt has five-ply rubberized fabric body and 1/4-inch top cover in addition to rib. Belts are available in 30 to 48-inch widths and in any length desired. Made by **Goodyear Tire & Rubber Co.**, 1144 E. Market St., Akron, O.

Mention Item NED-5302 when writing

For efficient electrically heated tanks, kettles, pots . . .

"OUR CHOICE IS STA-WARM"

Over and over again, in every part of the country, users of Sta-Warm melting tanks, kettles and pots back up their preference with additional purchases of Sta-Warm equipment. Whether it's for melting compounds, solder, glue, or 101 other materials! Whether its a giant 150 gal. tank or a half quart midget . . . users come back to Sta-Warm.

The reason is "satisfactory experience", "efficiency", "low operating cost", "negligible maintenance", "dependability" . . . or one of a dozen others.

When you need a heating, melting, pouring, dispensing or storage tank . . . inquire *first* for Sta-Warm electrically heated tanks.

Ask for special bulletins, prices, delivery. You'll be pleasantly surprised at Sta-Warm's fine service.

Sta-Warm ELECTRIC CO.

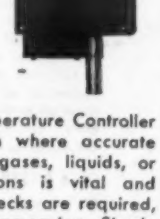
130 N. CHESTNUT ST. • RAVENNA, OHIO

Mention Item NED-5303 when writing

UNITED Electric Controls Company

NEW INDICATING TEMPERATURE CONTROLLER

SENSITIVE
RUGGED
ADJUSTABLE



A new Indicating Temperature Controller designed for installation where accurate temperature control of gases, liquids, or metal-to-metal applications is vital and where periodic visual checks are required, advisable or will prove time-saving. Simply and ruggedly constructed, the new control applies the highly sensitive response motion of a solidly liquid-filled bulb and bellows assembly to a snap-acting switch and indicating pointer. Adjustment over its specified range is accomplished easily with a knurled thumbscrew at the top of the control. Dimensions of the case are 5½" x 5½" x 1¾". The control weighs 3 lbs. Standard ranges 50°F to 350°F and 50°F to 600°F are offered, or special ranges may be had between −120°F to +600°F. Standard differentials available ½°F in circulating liquid, 2°F in air. Switch ratings of 10 amp 125 V AC and 5 amp 250 V AC are offered. Other electric load ratings available.

WRITE FOR COMPLETE DETAILS TODAY
UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

Standard & Special Thermostats & Pressure Switches

Mention Item NED-5304 when writing

THE FIRST NEW IDEA IN DRILL JIG BUSHINGS...

SINCE HECTOR WAS A PUP!

PAT. APPLIED FOR

For information and prices write for Meyco Bushing Catalog No. 19.

Meyco Carbide-Inserted Drill Jig Bushings Cost a Little More, But Last Much L-o-o-onger!

● Figure it out yourself: Actual field tests have shown that Meyco bushings with the carbide inserts outlast cast alloy, high speed steel and standard carbon steel bushings by 10 to 50 times . . . yet their cost is approximately 6 to 10 times that of ordinary bushings.

Meyco Carbide-Inserted Drill Jig Bushings will increase the life of drill jigs and fixtures, reduce non-productive machine time and non-productive man-hours, save on spoilage, save on inspection time and increase drill and reamer life.

No change is necessary in drafting room or tool design. Meyco bushings are made to ASA standards.

W. F. MEYERS CO., INC., BEDFORD, INDIANA

Mention Item NED-5305 when writing

METALS RECLAIMED WITH VACUUM

In this plant large quantities of magnesium chips are collected from the floor and lathes every few hours. Fire hazards are reduced, and the reclaimed material pays for the Spencer equipment in a few months. If necessary the Spencer System can be arranged so that the materials are immediately deposited under water as a double precaution against fire hazards.

Spencer is also used for removing or conveying liquids, fumes, powders and hot materials.

356-K

150 USES FOR VACUUM...ASK FOR BULLETIN

SPENCER VACUUM CLEANING
HARTFORD

THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.

Mention Item NED-5306 when writing

NEW TYPE D ENCLOSED SAFETY SWITCH has all these design improvements

FRONT OPERATED—Unique handle for front operation. Located in center of attractively styled cover.

MORE WIRING SPACE—Plenty of wiring room and easy-to-get-at terminals. Cleanly cut, easily removable knockouts.

REMOVABLE INTERIORS—Entire switch interior may be removed by loosening one screw.

POSITIVE MAKE AND BREAK—Double break silvered contacts.

COMPACT—Box measures only 4½ in. x 6⅛ in. x 3¼ in.

RATED AT 30 AMP.
Write for bulletin today

TRUMBULL ELECTRIC

THE TRUMBULL ELECTRIC MANUFACTURING COMPANY
PLAINVILLE, CONNECTICUT

Other factories at Norwood, Ohio • San Francisco • No. Hollywood • Seattle

Mention Item NED-5307 when writing

CUT SHOP COSTS WITH BLUE HERON *Portable* CRANES

Enable one man to lift and move with ease up to 2 tons

1000 lbs. Capacity $140
2000 lbs. Capacity $193.50
1000 lbs. Capacity Special Garage Model $207.50
4000 lbs. Capacity $370

Blue Heron Portable Cranes are invaluable as the main crane in small shops, an auxiliary in large shops. Readily pass through doors and along shop aisles. Large rollers for easy moving. Adjustable in height; reach into places where manual lifting is not possible. Welded steel construction, cut steel gears, generous overload safety factor. Write for illustrated folder and name of nearest supplier.

CAM TOOL CO., INC. 288-21st Street Oakland 12, Calif., U.S.A.

Mention Item NED-5308 when writing

New Processes & Materials

ACID CORE SOLDER

Alpha Tri-Core Leakpruf solder incorporates three individual acid cores and can be used for soldering stainless steel, Monel, nickel and other metals. Hard flux is extremely active, has minimum corrosive effect on metals soldered, is soluble in water and can be washed off after completion of operations. Metals should first be heated by iron or flame and solder then introduced so that flux can flow onto work ahead of molten solder. This produces permanent bond. Solder is packaged in 1, 5 and 20-pound spools. Made by **Alpha Metals, Inc.**, 363 Hudson Ave., Brooklyn 1, N. Y.

Mention Item NED-5309 when writing

PROTECTIVE SKIN CREAM

Kum-Klean protective skin cream is compounded to protect workers hands from harmful chemicals, paints and varnishes and also aids in preventing dermatitis. Preparation is rubbed into hands before beginning work, and when work is finished, all grease, paint and oil are easily washed from hands in water. Cream is not soluble in paint, varnish or reducers. Material is available in 8-ounce cans for individual use and in cartons of 12 cans. Made by **Advance Paint Co.**, 545 W. Abbott St., Indianapolis 7, Ind.

Mention Item NED-5310 when writing

PREFINISHED METAL TUBING

Tubular frame furniture, fixtures, garment racks, guard rails, stanchions and seat rails in transit vehicles, as well as color-coded fluid lines in processing plants can be fabricated of this Rub-Bub Color Armored tubing. It is an electric-welded steel tube covered with 1/32-inch coating of plastic color armor which is deposited by extrusion process that shrinks protective coating over tube. Coating is self-cleaning and tough enough to withstand severe shocks and forming without cracking, fracturing or peeling.

Tubing can be fabricated to any desired shape, and elasticity is maintained from —30 to 190 F. Impervious to moisture, salt air, hand and food acids, oil and grease, coating provides for long service life. It is also warm to touch and has high dielectric properties. Tubing is available in green, yellow, red, brown, blue and gray colors. Samples are available upon request. Made by **Samuel Moore & Co.**, Mantua, O.

Mention Item NED-5311 when writing

DIE CUSHIONS THAT MODERNIZE YOUR DIE CONSTRUCTION AND DESIGN

ADAPTABLE TO ALL DEEP DRAWING AND FORMING PRESS OPERATIONS

self-contained unit, quickly installed on any punch press

Furnished with hardened and ground pin pressure pad

DIE CUSHION SIZE	5"	6"	8"	10"	12"	14"	16"
MAXIMUM DRAW (inches)	2"	2½"	3"	3"	3"	4"	5"
DRAW RING PRESSURE (in tons)	.9	1.4	2.5	3.9	5.7	7.7	10.0

Write for Catalog No. 100-13

DAYTON ROGERS *Manufacturing Company*
MINNEAPOLIS 7, MINN.

Mention Item NED-5312 when writing

Small space requirement and low cost make Mercury Electric Counters ideal for built-in applications. Low current draw (approx. 2 watts). Enclosed working parts, tamper-proof case. Speeds to 600 CPM and more. Operates in any position. Non-reset. Counts anything that will operate an electric switch or electric-eye.

Counting Problems SOLVED

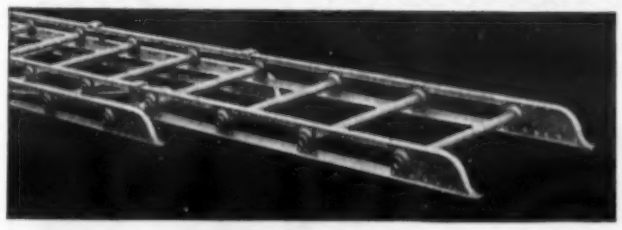
Send for Catalog or tell us what you want to accomplish.

Production Instrument Company
700-12 W. Jackson Blvd., Chicago 6, Ill.

Manufacturers of Counting, Timing and Recording Devices

Mention Item NED-5313 when writing

LIGHT DUTY *Aluminum* EXTENSION LADDERS



This extension ladder was designed for use where an extremely light weight ladder of considerable strength is required.

Known as Type LDL, this ladder, with rounded ends, is made from two single wall ladders. The fly ladder is supplied with locks, pulleys and ropes as standard equipment. Rungs are corrugated for safety's sake, and are evenly spaced 14" apart. When desired, ladder may be separated so that each section becomes an independent single wall ladder.

If a heavy duty extension ladder is desired, specify Type 2EL or 3EL. Write for full details.

"Original Manufacturers of Aluminum Ladders"

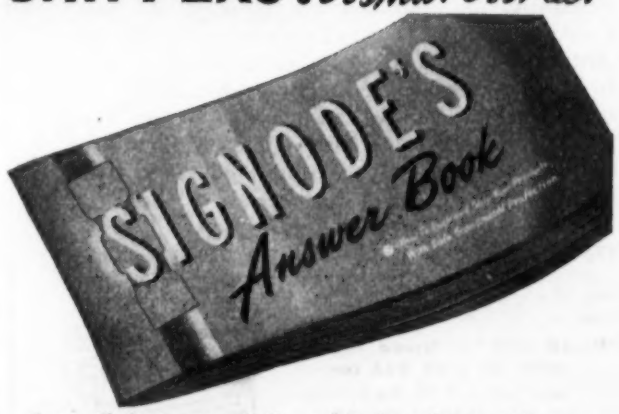
SPECIFICATIONS FOR TYPE LDL

Model	Length of Ladders		Thickness	Weight
	Un-extended	Extended		
LDL 2 20'	10' 10"	17' 10"	6¾"	45 lbs.
LDL 3 24'	12' 0"	20' 2"	6¾"	48 lbs.
LDL 4 28'	14' 4"	24' 10"	6¾"	54 lbs.
LDL 5 32'	16' 8"	29' 6"	6¾"	60 lbs.
LDL 6 36'	17' 10"	31' 10"	6¾"	66 lbs.
LDL 7 38'	19' 0"	34' 2"	6¾"	70 lbs.
LDL 8 40'	20' 2"	36' 6"	6¾"	74 lbs.

Aluminum Ladder Company
346 Carbis Street
Worthington, Pa.

Mention Item NED-5314 when writing

SHIPPERS! *It's New! It's Free!*



Just off the presses! Signode's brand-new 24-page book of better shipping protection methods! No matter what products you ship: lumber, steel, paper, food, electrical appliances or machinery...or how you ship them...you owe it to yourself to send for Signode's "Answer Book." It's free! Mail the coupon today!

Gentlemen: Send me a free copy of your "Answer Book." This does not obligate me in any way.
Company .....
Address .....
City ..... Zone ..... State .....
We ship ..... in Cartons ☐ Boxes ☐
Bundles ☐ Bags ☐ On Pallets ☐ On Skids ☐ In Carloads ☐

SIGNODE STEEL STRAPPING COMPANY
2632 N. WESTERN AVENUE
CHICAGO 47, ILLINOIS

Mention Item NED-5315 when writing

KOPPERS PLASTIPITCH* PROTECTED METAL

Corrugated steel roofing and siding—protected against costly rust and corrosion with tough, thick Plastipitch coatings.

1. Speeds construction
2. Keeps first costs low
3. Reduces need for paint and maintenance

Write for this manual

*Registered Trade Mark, U.S. Pat. Off.

KOPPERS

KOPPERS COMPANY, INC.
Department 711T • PITTSBURGH 19, PA.

Mention Item NED-5316 when writing

MICRO *Precision Switches*

Here's how to free manpower for other jobs

This pin stamping machine used by the Burgess-Norton Manufacturing Company of Geneva, Illinois employs a MICRO precision switch for actuating the cycle of operation. Previously a hand stamping job, it has been changed to an automatic operation. Sixteen man-hours were saved each day and the two men formerly required were placed on other work.

MICRO precision switches installed on present equipment are proving production boosters and are saving time and money in many plants. They are used to add safety features, to make machines automatic, for limit controls, to start and stop cycles of operation and to turn on warning lights. Acquaint yourself with MICRO precision switches by sending for complete literature; then check the many places where they can be used for plant improvement. One plant boasts of several hundred uses that have helped to increase production, save man-hours and give added safety.

HERE'S HOW IT WORKS

The MICRO precision switch actuated by the air cylinder starts a timing cycle on two timers. One timer controls the feed of the pins into the unit, the other brings the stamp down at the proper time.

"MICRO TIPS" is issued regularly write for your free copy

This house organ is an idea exchange for uses of snap-action switches. It contains sketches and descriptions of how others have applied snap-action switches to existing equipment to improve safety to operators and machines, to make machines automatic and to increase production.

© 1948 First Industrial Corp.

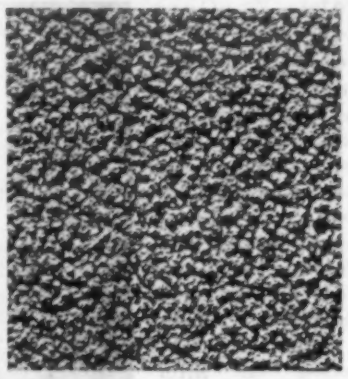
MICRO MS SWITCH
A DIVISION OF FIRST INDUSTRIAL CORPORATION
FREEPORT, ILLINOIS, U.S.A.

BRANCH OFFICES: CHICAGO 6, 308 W. Washington St.; NEW YORK 17, 101 Park Avenue; CLEVELAND 15, 2536 Euclid Avenue; LOS ANGELES 14, 1709 West 8th St.; BOSTON 16, 126 Newbury St.
SALES REPRESENTATIVES: PORTLAND, ORE., 917 S. W. Oak Street; ST. LOUIS 5, 9625 Delmar; DALLAS, TEXAS, Irwin-Keasler Bldg.; TORONTO, Ontario, Can., 11 King St. West.

Mention Item NED-5317 when writing

New Processes & Materials

FLOOR COVERING



Nonslip Velvomat floor covering developed for use in automobiles, railroad cars, airplanes and buses can be formed in one piece and used without binding. In addition, covering is recommended for use in corridors, on stairways and other locations requiring nonslip surface. Covering provides luxurious feel and is practical in use. It can be swept, vacuum cleaned or washed. Material is built up on burlap, fabric or rubber backing and can be varied in thickness, weight and pattern. It can be produced in many colors. Made by **United States Rubber Co.**, 1207 Rockefeller Center, New York 20, N. Y.

Mention Item NED-5318 when writing

QUICK-DRYING UNDERPRIMER

Quick-drying corrosion resistant Perma-Skin underprimer coating combines metal surface treatment with high anchorage for top coats and excellent adhesion to a variety of surfaces such as cold rolled steel, aluminum, nickel, copper and stainless steel. On ferrous surfaces, corrosion is inhibited by phosphatization and action of contained pigments. Underprimer can be used with practically all conventional finishing materials such as oleoresinous paints, alkyds, baking enamels and lacquer. Perma-Skin 3-coat Vinyl is recommended for use where maximum chemical resistance is required; for maximum resistance to salt water corrosion, No. 2901 is used; and for fresh water immersion, No. 2900 underprimer is suggested. Made by **Dennis Chemical Co.**, 2703 Papin St., St. Louis, Mo.

Mention Item NED-5319 when writing

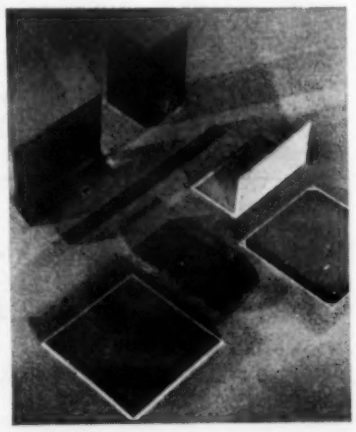
DUCT INSULATION

Two Fiberglas materials are designed for insulating either hot or cold ducts. They will not support combustion, corrode metals or rot. Coated type duct insulation is lightweight material in board form and has coating on both sides which facilitates handling. It can be cut accurately with knife to conform to irregular shapes and curved surfaces and can be scored to take gradual or sharp bends. Coated surfaces can be painted or covered with asbestos paper or canvas. Thermal conductivity is approximately 0.26 at 75 F mean temperature, and density is 6 pounds per cubic foot.

Flexible type duct insulation is designed primarily for application on concealed ducts where finish is not required. Two densities and weights are available. Thermal conductivity is 0.23 to 0.25 at 75 F mean temperature. Both insulation materials will dry out rapidly if wetted and original efficiency is unimpaired. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

Mention Item NED-5320 when writing

PLASTIC WALL TILE

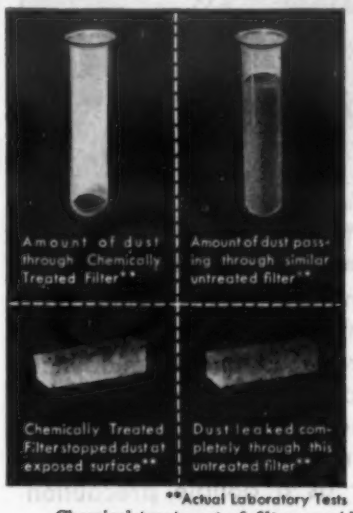


Available in white, ivory, black, blue, dubonnet and in marbleized peach, blue, yellow and green color combinations, this Hako plastic wall tile can be installed over plaster, wallboard, wood, cement and other surfaces without preliminary wall preparation. Tile is unaffected by water and will not shink or warp. In addition, it is resistant to food acids and common cleaners with exception of petroleum base solvents.

Tile weighs 5½ ounces per square foot, and it is applied by means of mastic cement. For fitting around plumbing fixtures and electrical outlets, tiles can be cut and otherwise shaped with ordinary coping or hack saw. Made by **Hachmeister-Inc.**, 2332 Forbes St., Pittsburgh, Pa.

Mention Item NED-5321 when writing

Acclaimed as One of the Greatest Advances in Respiratory Protection in Years



NEW AO* R-2000 RESPIRATOR with Chemically Treated Filter

**Actual Laboratory Tests

Chemical treatment of filter provides far greater efficiency, hence a far smaller filter (only five inches approximately) is possible. A smaller filter container is used for greatly superior comfort and improved front and side vision. There is no increase in low breathing resistance despite vastly increased filtering efficiency. Filter is disposable and equipped with a gauze pre-filter which adds to filter life by barring larger particles of foreign matter. Respirator may be worn with new AO R-18 Plastic Face Shield. Your AO Safety Representative can supply you.

*Approved by the Bureau of Mines.

Safety Division — American Optical Company

Southbridge, Massachusetts • Branches in Principal Cities

Mention Item NED-5322 when writing

New Efficiency and Savings in Your Yard with

ROUSTABOUT CRANES

The fast tractor-footed load-hustlers

● Wide open yard spaces that eat up profits start paying off with Roustabout Cranes on the job, loading, unloading, moving, shifting, stacking. Grab-bucket, hook or magnet, *where* you want them, *when* you want them. Engineered for years of overwork—mounted on wheel or crawler tractors. Loads to 7½ tons. Roustabout saves costly delays and manpower—pays for itself fast. Write for the money-saving facts today—to **Dept. P-4.**

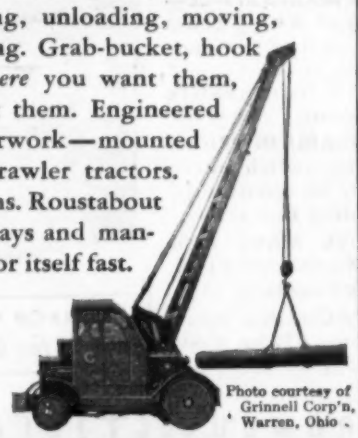
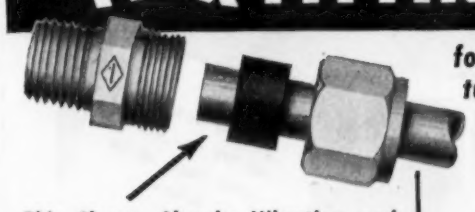


Photo courtesy of Grinnell Corp'n, Warren, Ohio.

HUGHES-KEENAN CORPORATION
MANSFIELD, OHIO, U.S.A.
Load-Handling Specialists since 1904

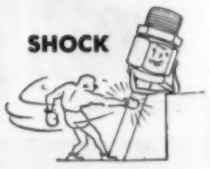
Mention Item NED-5323 when writing

IMPERIAL FLEX FITTINGS



for connecting tubing where there is

MAJOR VIBRATION



SHOCK

MINOR TUBE MOVEMENT

This Sleeve Absorbs Vibration and Shock . . . The Flex Fitting embodies a sleeve of synthetic elastic material which permits tubing to flex back and forth through the angle shown and at the same time assures a positive, pressure-tight seal.

Flex Fitting Makes Joints Virtually Indestructible by Vibration . . . On tests where ordinary fittings failed after 73,000 cycles of vibration, these fittings withstood over 20,000,000 cycles without failure.

For All Kinds of Tubing . . . Imperial Flex Fittings can be used with all types of seamed or seamless metal tubing —sizes ⅛" to ¾" O.D. Very easy to install. Proved by extensive use in the field. Ask for Catalog No. 344-C.

See Your Industrial Supply House

THE IMPERIAL BRASS MFG. COMPANY
510 S. Racine Avenue, Chicago 7, Illinois

IMPERIAL
Pioneers in Tube Fittings and Tube Working Tools

Mention Item NED-5324 when writing

CLARK
Bulletin 6080
A. C. MAGNETIC STARTERS

Primary Resistor Type for Squirrel Cage Motors

Where mechanical limitations of drives require reduced starting torque or where Power Companies restrict starting voltage,—use CLARK Bulletin 6080 Magnetic Starters for A.C. squirrel cage induction motors.

Starting voltage is reduced by connecting motors to line through a resistor which is short circuited after a definite adjustable time to allow full voltage. High-inertia type starters available for machines with accelerating time of more than 5 seconds.

FEATURES:

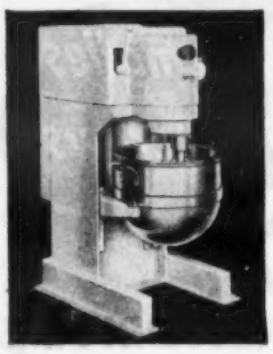
- Definite Time Acceleration!
- Reduced Voltage Starting!
- Edgewound Accelerating Resistors!
- Motor Overload Protection!
- Copper to Copper Contacts!
- Self-Cleaning Contacts!
- Arcs Quickly Extinguished by Blowouts!
- Swing-out Cabinet for Ease of Inspection!

Bulletin 6080 Primary Resistor Starters are available in reversing and non-reversing types, sizes 2 through 7. Write for Bulletin 6080.

THE CLARK CONTROLLER CO.
EVERYTHING UNDER CONTROL · 1146 EAST 152nd STREET, CLEVELAND 10, OHIO

Mention Item NED-5325 when writing

TOUGH BEARING "SPECS"!

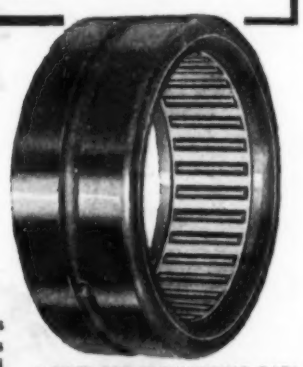


- VERTICAL SHAFTS
- OVERHUNG LOADING
- COMPACT SPACE
- HIGH CAPACITY

Orange Cage Type Bearings have been meeting these stiff requirements in the beater planetary shafts of 40 and 80-quart "Triumph" Vertical Mixers for more than a year without a single replacement.

. . . met successfully by

ORANGE
Cage Type
NEEDLE BEARINGS



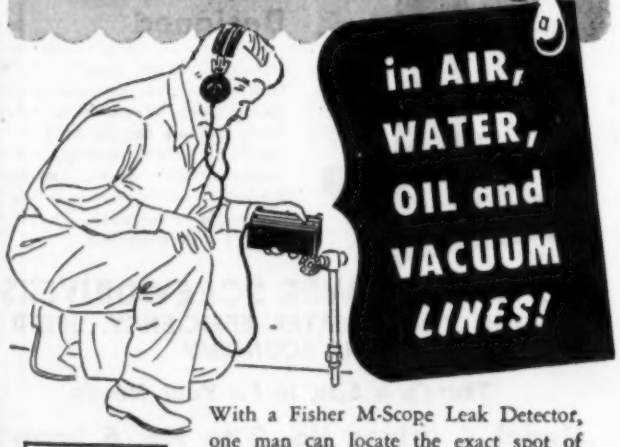
Orange Cage Type Needle Bearings assure permanent alignment of rollers and prevent skewing. May be used in vertical and overhung applications; less affected by misaligned mountings. Internal clearances can be precisely controlled to meet exacting requirements—an important advantage on spindles and high speed applications.

* SEND FOR ENGINEERING DATA BOOK showing construction, advantages, sizes, etc.

ORANGE ROLLER BEARING CO., Inc.
568 Main St., Orange, N. J.

Mention Item NED-5326 when writing

LOCATE LEAKS..



With a Fisher M-Scope Leak Detector, one man can locate the exact spot of costly leaks in **oil, water, pressure,** and **vacuum** lines. No special training is required to operate the M-Scope Leak Detector . . . which will pay for itself out of the savings it effects.

FREE BOOKLET
Write Dept. 2 Today

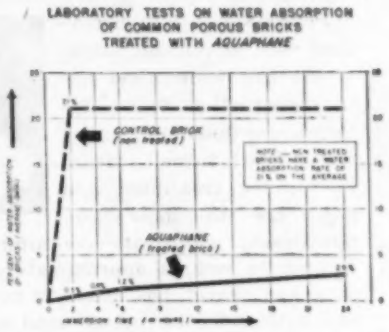
FISHER M-SCOPE EQUIPMENT
FROM $67.50 DEL.

Fisher Research Laboratory, Inc.
PALO ALTO · CALIFORNIA

Mention Item NED-5327 when writing

New Processes & Materials

MASONRY WATERPROOFER

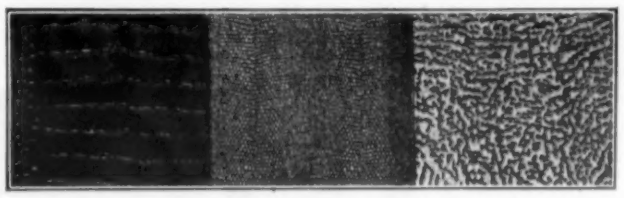


Transparent Aquaphane protective coating can be applied to common brick and porous masonry walls to prevent penetration of rain, dampness, snow, sleet and water. Material consists of highly dispersed, water repellent, organic ingredients, and in emulsion form it has milky white appearance. It is stable as emulsion at temperatures ranging from 40 to 160 F and will withstand temperatures up to 212 F as coating. It can be applied by brush to either moist or dry surfaces. Coating is noninflammable and nontoxic, will not peel or dust off, and does not affect color or texture of wall surface. Made by **International Aquella Products, Inc.,** Rockefeller Center, New York 20, N. Y.

Mention Item NED-5328 when writing

EMBOSSED PLYWOOD

Embossed Dec-O-Ply plywood is now available in alligator, Spanish, python and sharkskin leather patterns. These decorative designs can be applied to any kind of



wood from low-grade, unsanded gum or Southern pine panel to the more expensive woods such as walnut and mahogany. Finished product can be used effectively in offices, waiting rooms, reception rooms or conference rooms; or in the fabrication of carrying cases, radio cabinets, product packages, table tops, furniture and display fixtures. Finishing of embossed plywood ranges from clear lacquer resin sealer to solid color and two-tone antique effect. Made by **Aetna Plywood & Veneer Co.,** 1707 Elston Ave., Chicago 22, Ill.

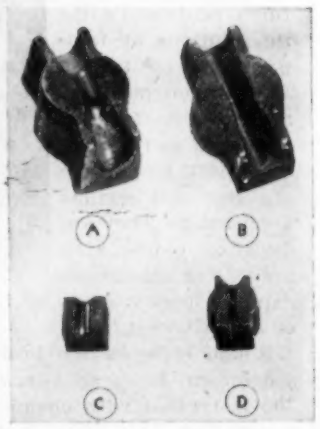
Mention Item NED-5329 when writing

PIPE JOINT COMPOUND

Brushed on threads, gaskets, flanges, studs, bolts, nuts and plugs, Plastic Lead Seal No. 2 pipe joint compound assures tight joint, prevents galling or rust of threads and does not harden or dry out. It will not injure or stain polished finishes; is insoluble; and seals joints in lines carrying air, water, steam, refrigerants, butane, propane and other petroleum derivatives at temperatures up to 500 F. On well finished surfaces, it can be used as seal in place of gasket. Compound is available in 1, 2, 4 and 8-ounce tubes for enclosing in assembly kits as well as for general industrial use. Made by **Crane Packing Co.,** 1816 Cuyler Ave., Chicago 13, Ill.

Mention Item NED-5330 when writing

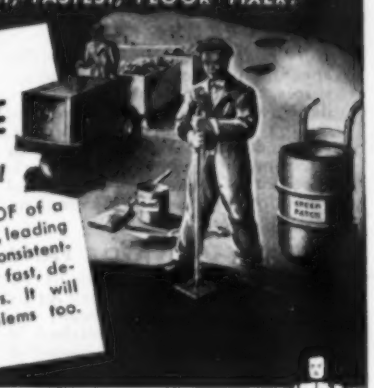
WIRE STRAIGHTENING DIES



Tungsten carbide wire straightening dies designated A and C in illustration provide maximum resistance to harsh abrasive action of scale on hot roll wire. Comparative durability can be seen in comparing them with chilled cast iron dies B and D. The carbide dies have lasted over 300 days while those previously used averaged two days. Tests indicate that for larger sizes of wire, from ¼-inch diameters and up, carbide insert in casting gives maximum wear and reduces die cost. Solid carbide die C for smaller wire has ground and lapped finish which assures long life and eliminates scoring and scratching of wire where finish is important. Dies can be used on Lewis, Sleeper & Hartley, Shuster, Wells and other wire straightening machines. Made by **Adamas Carbide Corp.,** 40-30 23rd St., Long Island City 1, N. Y.

Mention Item NED-5331 when writing

SIX FIRMS ALONE ORDERED AND RE-ORDERED MORE THAN
3/4 MILLION POUNDS
SPEED PATCH
WORLD'S FINEST, FASTEST, FLOOR FIXER!



TAKES ONLY ONE MINUTE PER SQUARE FOOT!

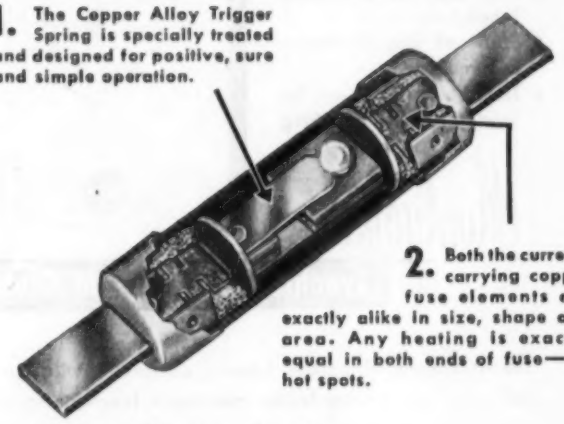
Repeat orders are PROOF of a product's merit. For years, leading firms everywhere have consistently used Speed-Patch for fast, dependable floor repairs. It will solve your floor problems too. Write . . .

ROCK-TRED Corporation
629 West Washington Blvd • Chicago 6, Illinois
In Canada: Rock-Tred Corporation (Canada) Limited, Toronto 5

Mention Item NED-5332 when writing

These 2 Features Mean MORE DEPENDABLE PROTECTION

1. The Copper Alloy Trigger Spring is specially treated and designed for positive, sure and simple operation.



2. Both the current-carrying copper fuse elements are exactly alike in size, shape and area. Any heating is exactly equal in both ends of fuse—no hot spots.

Safe Time Delay

The extra time lag prevents unnecessary "blows"—yet safety is provided it dangerous short circuits, harmful overloads or damaging heat rises take place.

The two features of Jefferson Saf-T-Lag Thermal Fuses illustrated above are reasons for the close control of capacity calibration, and accurate dependability of operation.

Protect Equipment And Factory Output

By preventing unnecessary stoppages while protecting against motor and electrical equipment damage—Jefferson Triple-Action Saf-T-Lags keep machinery on the job for maximum output. Jefferson *Safe* Time Lag Fuses incorporate the experience of 50 years of fuse design and manufacture. Sold through wholesalers.

CAPACITIES: Ferrule type 1 to 60 amperes, 250-V and 600-V; Knife-Blade type 70 to 600 amperes, 250-V and 600-V.

Write for new Fuse Booklet 482-ST.

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois
In Canada: Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.

JEFFERSON ELECTRIC

*Reg. U. S. Pat. Off.

Triple-Duty SAF-T-LAG* Thermal FUSES

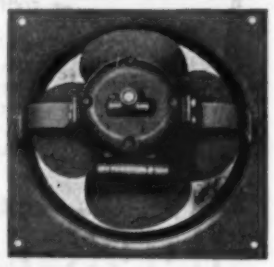
Mention Item NED-5333 when writing

Prompt Deliveries on Peerless Exhaust Fans

A number of sizes and models of Peerless exhaust and ventilator fans are now available for prompt shipment. This is your opportunity to meet your needs with fans of proven performance, attractive design and quiet operation—all carrying the famous Peerless name and powered with Peerless Motors. Send us your requirements.

DE LUXE FANS

Here is an *extremely quiet*, variable speed, attractively designed fan for stores, restaurants, hotels and similar installations. Totally enclosed motors exclude dirt and moisture. Fans may be mounted vertically or horizontally. Supplied for single speed, two-speed, or three-speed operation. Finished in Buckingham grey. 16" to 30" sizes.



SMALL VENTILATOR FANS

These fans provide plenty of air movement for homes, small grills and offices. Motors are totally enclosed. Fan and panels finished in Buckingham grey. Sizes—10-inch 6 blade; 12- and 16-inch 4 blade; 12-inch multiblade.

THE Peerless ELECTRIC CO.
WARREN, OHIO

Mention Item NED-5334 when writing

ON TIME! AUTOMATICALLY

- Ring Bells on a Regular Schedule—
- Start and Stop Machinery and Equipment—
- Time Your Operations for Start, Duration and Stop

WITH **Montgomery** Synchronous Program Clock

Montgomery Program Clocks, at new low prices, will give you dependable, automatic time-control of any 12 or 24-hour schedule of signals or electrically actuated equipment. Clocks permit signals at intervals of 2½ and 5 minutes—will control one to four separate circuits. An automatic calendar switch cuts out the circuits over week-ends if desired. Get complete information. Write for Montgomery catalog.

MONTGOMERY MANUFACTURING COMPANY
357 WEST WASHINGTON BOULEVARD CHICAGO 6, ILLINOIS
(Factory: Owensville, Indiana)

Mention Item NED-5335 when writing

Keep the CENTER

with *Anti-Scoring* **LUBRICANT**

ACTUAL tests prove that CMD Anti-Scoring Lubricant withstands pressures exceeding 50,000 pounds per square inch. Reduce operating costs—give your tools and equipment the best anti-scoring protection available—CMD Center Point Lubricants. Write for FREE SAMPLES and catalog!

CMD Helical Groove LATHE CENTER *(shown above)* has groove to carry oil right to point. Center lasts longer, stays cooler.

MAIL COUPON NOW!

CHICAGO MANUFACTURING AND DISTRIBUTING CO.
Dept. NED-7, 1928 West 46th Street, Chicago 9, Illinois

Without obligation please send us a free sample kit of one tube of CMD Center Point Lube and one tube of CMD Center Point Oil. Also, send Catalog describing CMD Helical Groove Centers.

NAME.....
FIRM NAME.....
ADDRESS.....

Mention Item NED-5336 when writing

New Processes & Materials

LIGHTWEIGHT AGGREGATE

PerAleX is newly discovered rock of volcanic origin which has widespread use in construction field. Material contains entrapped water which turns to steam in furnace treatment and pops ore to snow-white lightweight aggregate containing insulating air cells. Aggregate weighs approximately one-tenth as much as sand and gravel, has about 20 times the insulation value, and is intended to replace sand and gravel in plaster and other masonry products such as bricks, blocks, insulated floors and roof decks. End products are strong enough to support construction loads. Made by **Alexander Film Co.**, AleXitE Engineering Div., Alexander Film Bldg., Colorado Springs, Colo.

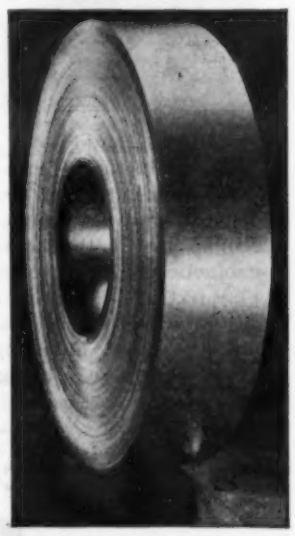
Mention Item NED-5337 when writing

HEAT-RESISTANT FINISH

Use of heat-stable silicone resins in Mico heat-resistant finish affords protection of metal at temperatures up to 1000 F. This aluminum type paint can be applied by brush, dip or spray and affords protection against heat, water, acids and alkalies. It is supplied in 5 and 55-gallon containers. Made by **Midland Industrial Finishes Co.**, Waukegan, Ill.

Mention Item NED-5338 when writing

STAINLESS STRIP STOCK



Bright-annealed cold-rolled strip stock is now available in 18-8 analysis. By means of new process, chrome-nickel steels in dead-soft annealed temper are converted to bright mirror-like finish without buffing. Finish is achieved by rolling material with tungsten carbide rolls. Stock is available in widths up to 7½ inches and in thicknesses of 0.001-inch and heavier. It can be furnished in coils weighing up to 300 pounds per inch of width, and fractional-inch sizes can be bobbinwound to produce many times the footage of coils wound in customary manner. Available from **Cold Metal Products Co.**, 111 Beeghly St., Youngstown, O.

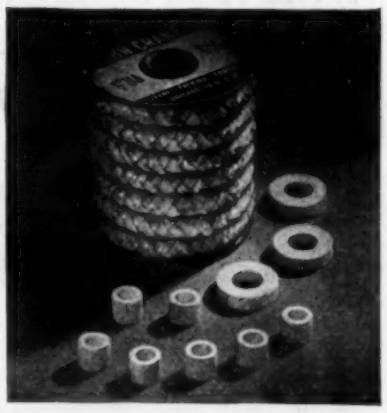
Mention Item NED-5339 when writing

WATER RESISTANT ADHESIVE

Paper cups and food containers fabricated with Cup-Seam adhesive are highly water resistant and will withstand contact with both hot and cold liquids for prolonged periods of time without leakage or staining of paper. This adhesive is white emulsion which dries to clean colorless film and is odorless, free from solvents and non-toxic. Made by **National Starch Products, Inc.**, National Adhesives Div., 270 Madison Ave., New York 16, N. Y.

Mention Item NED-5340 when writing

CHEMICALLY INERT PACKINGS



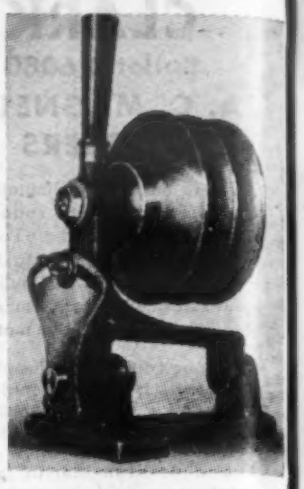
Fabricated of Teflon flexible plastic which is inert and chemically resistant to solvent acid mixtures, acids and caustic solutions at temperatures up to 690 F, Chemlon packings are suitable for use in valves and for rotary shaft, reciprocating rod and similar applications. They are designed especially for sealing against escape of liquids, gases or fumes of a highly inflammable or corrosive nature.

Round cross-section braided packings are available in spool form in ⅛ to 1-inch diameters. John Crane style 706 is treated with chemically resistant lubricant which is unaffected by acids and caustics at temperatures up to 300 F. John Crane style 704 is braided of Teflon only and is recommended for applications at operating temperatures above 300 F.

Also available are Teflon ring type packings which possess required resilience for endless ring installations. Style 772 contains no lubricant, and style 776 is impregnated with graphite. Made by **Crane Packing Co.**, 1816 Cuyler Ave., Chicago 13, Ill.

Mention Item NED-5341 when writing

VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H. P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.**, 2224 Albion St., Toledo, O. —Advt.

Mention Item NED-5342 when writing

Are Your Assemblies Fastened with Screws?

DETROIT POWER SCREWDRIVERS
Will Eliminate Assembly Bottlenecks

Most Efficient Screw Pick-Up Hopper Ever Designed

Motorized barrel type . . . Will feed screws, nuts, washers, pins and special parts adaptable to hopper. These hoppers can be used on hydraulic or crank presses, riveting machines and special machines. Bracket designed for mounting at any angle. Four sizes: 10, 12, 16 and 24 inch diameters.

DETROIT POWER SCREWDRIVERS
BRING YOU GREATER EFFICIENCY, SPEED AND ECONOMY

There's a Size to Fit Your Needs

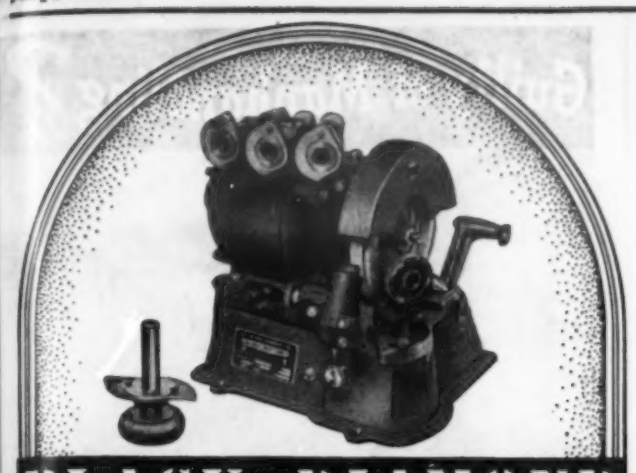
Model A drives No. 2 to No. 6 Screws
Model B drives No. 6 to ¼" Screws
Model C drives ¼" to ⅝" dia. Screws

All machines equipped with magazine feed hopper shown above, to feed all types of screws—standard and special heads, Phillips heads, and slotless heads. Driving time 1 to 2 seconds per screw. Uniform tension. No marring of heads. No stripping of threads. Screws are always in sight of the operator.

Send sample assemblies with screws for production estimates and prices on proper equipment for job.

DETROIT POWER SCREWDRIVER CO.
2319 WEST FORT ST. • DETROIT 16, MICHIGAN

Mention Item NED-5343 when writing



BLACK DIAMOND
PRECISION DRILL GRINDER

ANY DESIRED QUANTITY OF ACCURATELY GROUND, TRUE CENTERED SMALL DRILLS CAN BE PRODUCED EASILY ON THIS GRINDER

Anyone becomes a skilled operator in a few minutes with this machine . . . can't make mistakes . . . produces quantities of small drills, ground to perfection . . . with true centers and smooth lips of uniform length . . . correct angle and proper clearance for accurate drilling.

Black Diamond Grinders cut drilling time and drill grinding costs, on small gauge and fractional drills, 50% and more . . . save expensive drill stock . . . reduce breakage . . . quickly pay for themselves . . . and the Web Thinning attachment efficiently cares for Notched, Colton or Crank Shaft Points. If you use quantities of small drills, singly or in gangs . . you need a Black Diamond—now. Write for descriptive bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

▲ Mention Item NED-5344 when writing ▲

OVER 1000 HARD BLOWS A MINUTE

Thor
IMPACT WRENCHES
UNMATCHED for POWER

GARAGES
RAILROADS
SHIP YARDS
TRUCK FLEETS
ASSEMBLY LINES

On all types of jobs, the Thor Wrench is setting records for *speed* in driving nuts, bolts or cap screws—for *stamina* in standing up longer under impact shock—and for *economy*. Call a Thor branch today for full information.

INDEPENDENT PNEUMATIC TOOL COMPANY
AURORA, ILLINOIS
BRANCHES IN PRINCIPAL CITIES

Thor PORTABLE POWER TOOLS

PNEUMATIC TOOLS • UNIVERSAL AND HIGH FREQUENCY ELECTRIC TOOLS • MINING AND CONTRACTORS TOOLS

▲ Mention Item NED-5345 when writing ▲

A TRADE-MARK OF *Special Significance* TO YOU

WISCONSIN
HEAVY-DUTY
Air-Cooled ENGINES

The recently adopted trade-mark reproduced above, an attractive decal of which is placed on every Wisconsin Engine that leaves our plant, should be of particular interest to you...as a manufacturer, designer, or user of engine-powered equipment.

"Most H. P. Hours," as applied to Wisconsin Air-Cooled Engines, is today establishing a new measure of engine value. Its significance lies in the fact that it accurately expresses the thing you pay for and in which you are most interested — *maximum horsepower hours of dependable, on-the-job service.*

It's a point well worth remembering, and acting upon.

WISCONSIN MOTOR CORPORATION
World's Largest Builders of Heavy-Duty Air-Cooled Engines
MILWAUKEE 14, WISCONSIN

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NEW *Applications*

PROTECTIVE PLASTIC CAPS

Melt-coated Tenite caps are recommended for protecting fittings of delicate control devices in shipment and storage. Thermostatic expansion valves shown in illustration are safeguarded by caps of this material. Caps are formed by dipping mandrels into hot solution of Tenite thermoplastic material. Upon withdrawal, coating cools and hardens almost instantly into a waterproof, flexible film which is stripped from mandrel. Cap is forced with one movement over male nipples of valve inlets and outlets. Caps keep threads from being damaged and also exclude particles of dust and other foreign matter. Forced-fit locks caps in position, and it is necessary to unscrew them for removal. Material is cellulose acetate butyrate Tenite and is made by Tennessee Eastman Corp. Melt-coated caps are made by **Presstite Engineering Co.**, 3924 Chouteau Ave., St. Louis 10, Mo.

▲ Mention Item NED-5347 when writing ▲

AIR-DRYING COATING

Based on inert synthetic resins, LC-600 air-drying coating is suitable for use on tanks, fermenters, driers, pipe fittings, filter bodies and other equipment in pharmaceutical, food, paper and chemical industries. Ready for application without primer, it can be sprayed, dipped, flowed, roller coated, or brushed on almost any clean unpolished surface. It is resistant to acids, alkalies, chlorides, oils, salts, oxygen and alcohol solutions; has high dielectric strength; and is odorless and tasteless. Made by **Lithgow Corp.**, 333 W. 40th Place, Chicago 9, Ill.

▲ Mention Item NED-5348 when writing ▲

ABRASION-RESISTANT RUBBER

Used to line shot blast room, ¼-inch thick fabric-backed Armorite abrasion resisting rubber eliminates maintenance problem. In illustrated application, 2-inch wooden planking was formerly used to line the shot blast room. Normal life of this lining when cleaning rough castings was approximately one month. Since Armorite was installed in May 1947, there has been no shut-down for maintenance, and walls show no appreciable wear. Material made by **B. F. Goodrich Co.**, Dept. E, 500 S Main St., Akron, O.

▲ Mention Item NED-5349 when writing ▲

Sturdily Built for RUGGED USE

5-H-1-1-R STROKE COUNTER

The Productimeter Model "H" Heavy Duty line is designed for hard usage and long service. Constructed of highest quality materials . . . they are rigidly tested before leaving our factory.

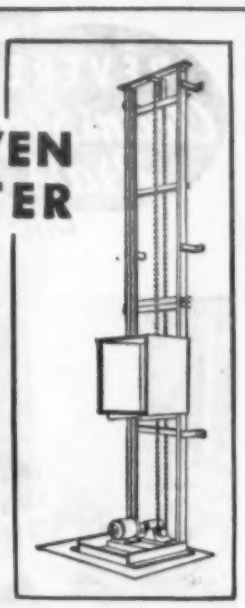
There is a Productimeter for every counting job . . . always accurate . . . always dependable. They eliminate all "guess-work" . . . insure profitable operations and more efficient use of man-hours in your plant.

PRODUCTIMETERS *Count Everything*
Send for Catalog No. 100.

DURANT MANUFACTURING COMPANY
1922 N. Buffum Street, Milwaukee 1, Wisconsin • 122 Orange Street, Providence 3, R. I.

▲ Mention Item NED-5350 when writing ▲

New . . .
POWER DRIVEN DUMBWAITER



500 lbs. Capacity

The newest addition to the SAGE line is this all welded steel constructed dumbwaiter with a lifting speed of 40 feet per minute. The platform 3 feet square is lifted by a wire rope drive electrically controlled. Wall brackets and rails are standard equipment. Special capacities and heights built to individual specifications.

THE SAGE LINE INCLUDES GRAVITY WHEEL CONVEYORS. PORTABLE BOOSTERS HAND TRUCKS FLOOR TO FLOOR CONVEYORS.

SAGE EQUIPMENT CO.
28 Essex Street Buffalo, N. Y.

▲ Mention Item NED-5351 when writing ▲

DON'T WASTE EXHAUST STEAM

USE DAVIS BACK PRESSURE VALVES

Efficient engineering requires the full use of all steam generated by the boilers. In non-condensing plants, the exhaust may be utilized for heating and manufacturing processes before the excess is finally relieved to the atmosphere. The automatic control of exhaust steam is the function of Davis Back Pressure Valves.

The Davis No. 80 is the original semi-balanced valve with double ports which has been refined and improved to a point where its service sets the standard for comparison. It is temperature compensated to eliminate possibility of sticking and insure proper closing. Standard sizes from 2-inch to 24-inch.

Davis No. 81 Back Pressure Valve features a patented flexible sealing disc member which makes the valve absolutely drip tight when closed. Where both pressure and vacuum conditions exist, at times, use the Davis No. 82 Back Pressure Valve.

Let Davis help you increase your plant operating efficiency. Write for complete descriptive literature today. Engineering recommendations furnished on request.

DAVIS REGULATOR COMPANY, 2531 South Washtenaw, Chicago, Illinois.

DAVIS REGULATOR COMPANY

▲ Mention Item NED-5352 when writing ▲

Aeroquip
SELF-SEALING COUPLINGS

TYPE 5100

With the installation of Aeroquip Self-Sealing Couplings, fluid-carrying lines can be disconnected without loss of liquid or inclusion of air upon reconnection.

Aeroquip Self-Sealing Couplings are suitable for lines carrying hydraulic fluids, oils, fuels, coolants or refrigeration gases. Write for further details.

Aeroquip for better performance, maintenance and service.

AEROQUIP CORPORATION JACKSON, MICHIGAN
303 WAREHAM BLDG., HAGERSTOWN, MD. • 2912 N.E. 28TH ST., FORT WORTH, TEXAS • 1051 NORTH HOLLYWOOD WAY, BURBANK, CAL. • 1419 2ND AVE. SO., MINNEAPOLIS 4 • IN CANADA: 72-74 STAFFORD STREET, TORONTO, CANADA

AEROQUIP PRODUCTS ARE MADE UNDER ONE OR MORE U. S. PATS. RE: 21,984; 2,209,266; 2,219,216; 2,391,022; 2,311,239; 2,203,922; 2,219,266; 2,254,997; 2,316,570; 2,371,971; 2,400,606; 2,226,702; 2,255,593; 2,266,211; 2,300,483; 2,375,614; 2,420,150

▲ Mention Item NED-5353 when writing ▲

REVERE Cleans Strip Brass with FULLERGRIPT Power Brushes

After continuous strip brass leaves the pickling bath at the New Bedford Division of Revere Copper and Brass, this strip is scrubbed clean by large, rotary Fullergript power brushes. Because of wet and acid conditions, Fuller designed these brushes with a dense load of heavy brush material gripped securely into rigid, rust-resisting metal channels. Revere benefits from more thorough cleaning by more durable brushes. You can also secure special purpose Fullergript brushes built to your individual specifications.

FULLERGRIPT

THE FULLER BRUSH COMPANY
INDUSTRIAL DIVISION
3530 Main St. • Hartford 2, Conn.

▲ Mention Item NED-5354 when writing ▲

TRUCK SPECIALISTS

"BAL" Built with a conscience

Made of thick hard vulcanized fibre, steel hardware, oak bottoms, maple reinforced. Built for years of service.

WE ALSO MAKE sturdy fibre TOTE BOXES

RACK, SHELF or BIN TYPES

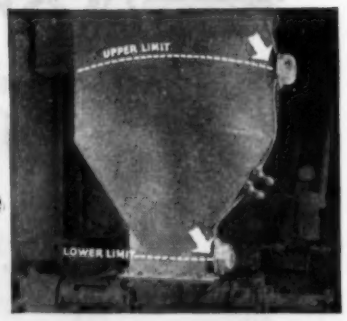
Made in standard sizes, or to order, by specialists with a reputation for quality. Give dimensions wanted; ask us to quote!

WILLIAM BAL CORPORATION
9 Johnson St.
NEWARK-2-N. J.

▲ Mention Item NED-5355 when writing ▲

BIN-DICATORS

...Release Men for Productive Work!



Many installations of two Bin-Dicators arranged as shown have released a man for productive work who formerly stood by to start and stop an elevator or conveyor as the bin filled or emptied.

When the level of material falls to the "Lower Limit," the Bin-Dicator will automatically start the feeding machinery. When the level of material rises to the "Upper Limit," the Bin-Dicator will automatically stop the feeding machinery.

Bin-Dicator Company • 14616 E. Jefferson • Detroit 15, Michigan

Free

Please send new 20 page illustrated catalog giving complete information and specifications on Bin-Dicators.

Name_____

Address_____

City_____ State_____ D7

▲ Mention Item NED-5356 when writing ▲

NEW Literature AND Catalogs

Welded Floats

W. H. Nicholson & Co.—Prices, weights, buoyancies, collapsing pressures and other information on welded floats are presented in 8-page illustrated bulletin No. 348. Floats are available in stainless steel; Monel; and chrome, cadmium or copper plated steel in spherical, elliptical and cylindrical shapes.

▲ Mention Item NED-5357 when writing ▲

Geared Motors

U. S. Electrical Motors, Inc.—16-page illustrated multicolored bulletin "U. S. Syncrogear Motors" discusses use of geared motor power in driving machinery and shows motors in single, double and triple reductions and for use in combination with Varidrive units. Models range from ¼ to 30 horsepower in size and have standard AGMA speeds from 10 to 10,000 revolutions per minute.

▲ Mention Item NED-5358 when writing ▲

Aircraft Cleaning

Turco Products, Inc.—26-page illustrated aircraft cleaning manual discusses methods, materials and equipment for airplane exterior and interior, engine, base, factory, terminal and commissary cleaning.

▲ Mention Item NED-5359 when writing ▲

Collet Chucks

Porst Bros. Mfg. Co.—"A Better Grip on Production" is title of 8-page illustrated booklet presenting information on Levermatic and Handmatic collet chucks which provide instant internal and external gripping and releasing. Indexing and stationary chuck mounting fixtures, stops and expanding arbors are shown and described briefly.

▲ Mention Item NED-5360 when writing ▲

Roofing Repair

United Laboratories, Inc.—56-page illustrated publication "Protect that Roof!" explains importance of roof protection and recommends specific process for complete or minor repair of every type of roof. These processes involve definite combinations of products applied in definite order to insure maximum roof protection.

▲ Mention Item NED-5361 when writing ▲

Acid & Alkali Resistant Coatings

Nukem Products Corp.—Three booklets discuss features, properties and application of Nukemite No. 24, 35 and 40 acid and alkali-resistant coatings which are solutions of inert synthetic resins and form tough film of exceptional elasticity.

▲ Mention Item NED-5362 when writing ▲

Universal Vises

Emmert Mfg. Co.—Universal woodworker's vise which can be used also for metalworking is described in illustrated pocket-size 8-page folder. Vise has seven pairs of jaws to hold all classes of work and can be adjusted quickly to almost any position.

▲ Mention Item NED-5363 when writing ▲

Grinding & Polishing Machines

Hammond Machinery Builders, Inc.—20-page illustrated catalog No. 325 shows and discusses applications of grinding, polishing and deburring machinery. Many products which can be finished on these machines are depicted.

▲ Mention Item NED-5364 when writing ▲

Roll Grinder

Farrel-Birmingham Co.—28-page illustrated bulletin No. 115 cites design and construction features of heavy-duty roll grinder which provide high production with precision, wide range of finishes, economy of operation and troublefree operation.

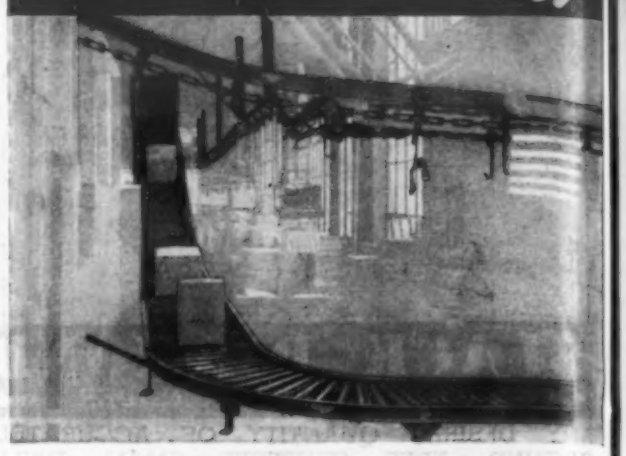
▲ Mention Item NED-5365 when writing ▲

Power & Heat Engineering

John Wiley & Sons, Inc.—509-page illustrated book "Steam, Air & Gas Power," fourth edition, by William H. Severns and Howard E. Degler explains underlying theory of construction, applications, and performance of modern heat-power plants and their correlated equipment. New material on gas turbines and other recent developments as well as revised data on previously treated subjects are included. Price is $4.75. Available directly from John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y.

▲ Mention Item NED-5366 when writing ▲

Guilty of Manhandling?



• Be both judge and jury. Why not let Buschman Engineered Conveyors sentence your slow moving material to a life of speeded production? A complete line of conveyors for practically every kind of industry. Our engineers will gladly consult with you on your handling problems. Write for additional information.

Buschman

THE E. W. BUSCHMAN CO. INC.
Spring Grove at Winton Place, Cincinnati 32, O.

▲ Mention Item NED-5367 when writing ▲

STURDY CONSTRUCTION NEAT APPEARANCE...

HALLOWELL

SHOP EQUIPMENT OF STEEL

Fig. 2197

The "Hallowell" Foreman's Desk of Steel is of all welded construction,—no weak or wobbly joints. It has a smooth writing surface—just the right height—just the right slant . . . and there are conveniently located pigeon holes and a drawer, for easy filing of papers, cards, records, etc.

Fig. 732
Pat'd. Pats. Pend.
Drawer is extra.

The sturdy, ready-made "Hallowell" Work-Bench of Steel assures years of utility. Several hundred combinations . . . and a number of standard heights, widths and lengths give you wide choice. Bench tops are of Steel, Steel covered with Masonite Tempered Presdwood or smooth, serviceable laminated wood. For further details . . . ask for your copy of the "Hallowell" Shop Equipment Catalog.

Write for the name and address of your nearest "Hallowell" Industrial Distributor

Over 45 Years in Business

STANDARD PRESSED STEEL CO.

JENKINTOWN, PENNA. BOX 581
BOSTON • CHICAGO • DETROIT • INDIANAPOLIS
ST. LOUIS • SAN FRANCISCO

▲ Mention Item NED-5368 when writing ▲

PORTELVATOR

The Hamilton Portable Elevating Table

Will Not Tip or Slip

STOP IDLE MACHINE TIME

When weight must be moved, send one man and PORTELVATOR.

Raises, lowers, transports; levels and supports overhanging work... Forms a work bench when and where you need it... Standard model capacities, 1,000 to 5,000 pounds. Special models designed and built on order. Write for bulletin.

THE Hamilton TOOL COMPANY
SUPER SENSITIVE DRILLING MACHINES · TAPPING MACHINES · PORTELVATORS
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

Mention Item NED-5369 when writing

THERMOCOUPLE POTENTIOMETERS

for Accurate Flexible Rapid

temperature measurement

Accurate temperature measurement—a vital factor in modern industry—can best be accomplished with thermocouples. The thermocouple method, with a General Electric Thermocouple Potentiometer, Type PJ-1, has these advantages over other methods:

1. Thermocouples can be placed where ordinary thermometers cannot.
2. Has three millivolt ranges, 0-6, 0-30, 0-60, and a variety of standard temperature scales can be supplied for measurement from below zero to 2500° F.
3. With use of standard transfer switch, as many as twenty different temperature readings can be taken in rapid succession.
4. Higher accuracy can be obtained, in most cases, than with thermometers.
5. Greater flexibility of measurement is afforded.

Typical applications include refrigerator-development work, oil burner and air-conditioning tests, steam-temperature measurements, and heat-run tests on electric equipment. For more information on applications and operating principles of the PJ-1, write for Bulletin GEC-245. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

Mention Item NED-5370 when writing

Stationary Outer Sheath Guarantees Safety

- Improved—25% More Power
- Full Electric Reverse for Rapid Withdrawal
- Increased Speed Through Greater R.P.M.
- Lighter due to New Aluminum Frame
- Rotating Inner Cables
- Lines 1¼" to 8"
- Runs up to 200 ft.
- Over 4,000 in use
- 8 years in production
- Each tool Engineered for particular purpose

OHIO TOOL & ENGINEERING CO.
SPRINGFIELD, OHIO

Mention Item NED-5371 when writing

New Literature—Continued

Scientific Instruments

American Instrument Co.—274-page illustrated catalog No. 48 presents information on numerous scientific instruments for use in chemical, biological, physical, metallurgical, engineering and materials testing laboratories. Comprehensive data on general laboratory equipment are included.

Mention Item NED-5372 when writing

Intake Air Filters

Dollinger Corp.—Complete line of Staynew dry type intake air filters for all types of air compressors, diesel and gas engines, blowers, motors and generators is covered in 8-page illustrated bulletin SIF. Silencer models, dry type and breather filters are available in sizes to handle from 6 to 8000 cubic feet per minute.

Mention Item NED-5373 when writing

Induction Heating

Allis-Chalmers Mfg. Co.—Advantages of induction heating in form of increased production and lower processing costs are discussed in 12-page illustrated bulletin No. 15B6430A. Diversified examples of brazing, soldering, hardening, annealing and heating with induction heaters are presented.

Mention Item NED-5374 when writing

Stainless Steel Plates

Allegheny Ludlum Steel Corp.—32-page illustrated booklet "Stainless Plates (Solid and Clad) and Their Fabrication" supplies information on application to and fabrication of products of both solid stainless steel and stainless clad plates, whether used alone or in combination. Sizes, thicknesses and weights are tabulated.

Mention Item NED-5375 when writing

Hydraulic Presses

Verson Allsteel Press Co.—16-page illustrated catalog No. H-47 presents full details and specifications on line of hydraulic presses available in capacities from 75 to 5000 tons. Also described is Hydrol Speed Circuit hydraulic system that minimizes high pressure piping and valving.

Mention Item NED-5376 when writing

Windows, Doors & Operators

William Bayley Co.—36-page illustrated 1948 catalog presents complete information on windows, doors and operators which conform to modular planning standards. Pivoted or projected types of windows are available in steel or aluminum while other styles as well as doors are offered in steel with special finishes for maximum surface protection supplied upon request.

Mention Item NED-5377 when writing

Hydraulic O-Rings

Crane Packing Co.—Illustrated engineering manual "John Crane Hydraulic 'O' Rings" contains 8 pages of tabulations of compound specifications, dimensional standards, and application and installation data on O-rings for use as either static or dynamic seals.

Mention Item NED-5378 when writing

Flexible Metal Tubing

Titeflex, Inc.—24-page illustrated catalog No. 113 describes tubing made of brass and bronze for nominal steam pressure applications, Monel and stainless steel for higher temperatures and corrosion resistance, and Inconel for extremely high temperatures. Bendable pipe, high frequency conductors and vibration eliminators are covered also.

Mention Item NED-5379 when writing

Electric Hoists

Lisbon Hoist & Crane Co.—New 3 and 5-ton capacity hoists added to Bob-Cat line are described in 8-page illustrated bulletin "Bob-Cat Electric Cable Hoists." They are light in weight, compact and made in three sections to permit easy access to any part by removal of only four bolts.

Mention Item NED-5380 when writing

Sheaves & V-Belts

Tann Corp., Congress Drives Div.—10-page illustrated catalog CD-200 and insert present sizes and list prices of A, B, C and D-section Q-D sheaves and multiple V-belts.

Mention Item NED-5381 when writing

Rotary Pumps

Foster Pump Works, Inc.—24-page illustrated catalog No. 8 presents complete information on Excelsior rotary pumps which can be belt, chain or gearmotor driven. With separate reduction unit, they can be driven by steam engine, electric motor, gasoline engine or steam turbine.

Mention Item NED-5382 when writing

Now it's Easy to have CLEAN FLOORS

LAWLOR DOES IT!

Don't care what kind of floor you have—what its size or condition may be—there's a right Lawlor to clean and wax polish it in a jiffy!

For 50 years Lawlor has specialized in improved floor cleaning equipment—anything from heavy-duty, electrically operated scrubbing units to mopping and wringer sets.

A SIZE TO FIT EVERY NEED

Today, write for new catalog

A size for every need

S. C. LAWLOR CO. 131 N. Aberdeen St., Chicago 7, Ill.

Mention Item NED-5383 when writing

100% Self-Contained

SYNTRON

Gasoline Hammer

PAVING BREAKERS

SAVE MONEY AND TIME

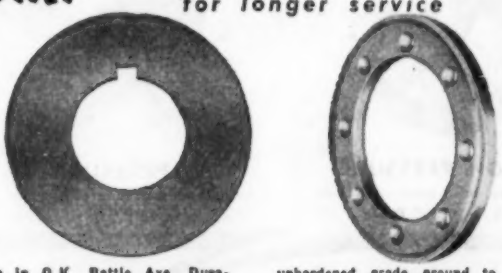
Busting—Cutting—Digging—Tamping

Write for illustrated folder

SYNTRON CO., 405 Lexington, Homer City, Pa.

Mention Item NED-5384 when writing

O.K. GANG SLITTER KNIVES *for longer service*



Made in O.K. Battle Axe, Dura-Chrome or Standard Carbon Grades. Precision ground to ±.0002 tolerances on thickness, diameter and bore. Extremely high finish. SPACERS for above in hardened or unhardened grade ground to same tolerances as Slitters. We make rotary cutters similar to the one shown for trimming sheet steel, light plates. Some are made with bevels for cutting paper, rubber, plastic, cloth, etc.

O.K. ROTARY SHEARS & BLADES *for maximum toughness*

The **OHIO KNIFE** *Co.*

CINCINNATI 23, OHIO, U. S. A.

CLIP AND MAIL TODAY

THE OHIO KNIFE CO., CINCINNATI 23, OHIO 4

Gentlemen: Please send without obligation specific data on knives I have checked.

☐ CIRCULAR KNIVES ☐ SHEAR BLADES

COMPANY_____

NAME_____

ADDRESS_____

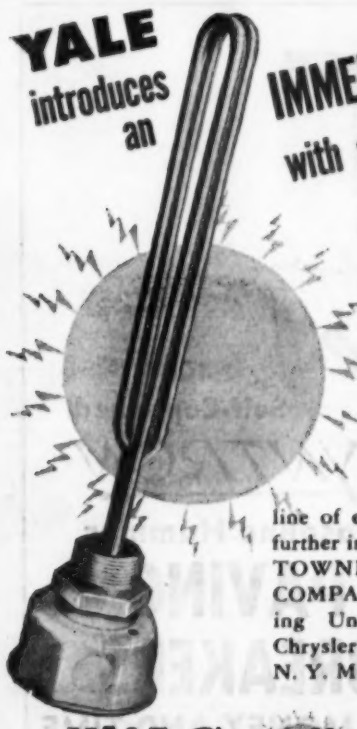
Mention Item NED-5385 when writing

The fact that all the horsepower goes through the coupling emphasizes the importance of protecting direct-connected machines against misalignment.

AJAX FLEXIBLE COUPLING CO. INC., WESTFIELD, N. Y.

▲ Mention Item NED-5386 when writing ▲

YALE introduces an IMMERSION HEATER with a new twist



Cut costs with this *new* YALE Rod Type Immersion Heating Unit. The YALE designed single element construction gives the same amount of heat in a given space as is achieved with the usual double heating unit!

Prompt shipment on Rod Type Heating Units —first of a *complete* YALE line of electric heaters. Send for further information. THE YALE & TOWNE MANUFACTURING COMPANY, YALE *Electric* Heating Unit Sales, Room 1040 Chrysler Building, New York 17, N. Y. Murray Hill 9-6700.

YALE *Electric* UNIFORM HEAT

THE BRIGHT SPOT IN ELECTRIC HEATING

YALE — Makers of the famous YALE lines of Locks, Door Closers, Pumps, Hoists, Industrial Trucks and Scales.

▲ Mention Item NED-5387 when writing ▲

THE "BRAINS" OF WIZARD CONTROLLERS

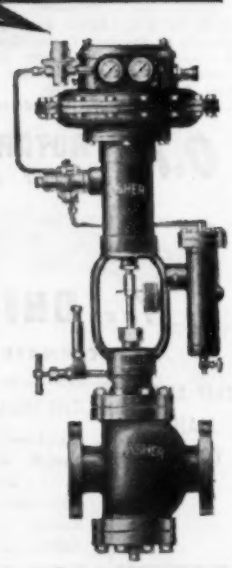
THE INGENIOUS, simply-designed mechanism of Fisher Wizard Controllers provides extreme accuracy and dependability in pressure control.

Fisher Wizard Controllers will completely solve your pressure control problems. They are individually built to meet your exact operating conditions, and are guaranteed to give satisfactory performance.

High pressure Fisher Wizards are available in throttling and snap acting types. Bourdon Tube pressures from 5 to 10,000 P.S.I. Diaphragm or remote panel mounting.

Low pressure Fisher Wizards available in diaphragm type mounting only. Bellows pressures from ½ to 15 P.S.I.

Write today for Fisher Wizard Bulletin D-3.



FISHER

GOVERNOR COMPANY
FISHER BUILDING
MARSHALLTOWN, IOWA

▲ Mention Item NED-5388 when writing ▲

New Literature—Continued

Industrial Processing Ovens

Gehnrich & Gehnrich, Inc.—32-page illustrated booklet "The Right Oven for Your Process" discusses basic types of oven heating systems, heating media, temperature and safety control, insulation, materials-handling problems, action of various products under heat, and seven basic oven and heater types.

▲ Mention Item NED-5389 when writing ▲

Automatic Machines

New Britain Machine Co., New Britain-Gridley Machine Div.—Folder entitled "It Can Be Done" contains ten illustrated leaflets relating case histories involving use of multiple spindle chucking, and screw machines and precision boring machines. Further studies will be sent at regular intervals

▲ Mention Item NED-5390 when writing ▲

Industrial Lighting Fixture Standards

RLM Standards Institute—36-page illustrated booklet "RLM Standard Specifications for Industrial Lighting Units", second printing, contains detailed information on 14 commonly employed incandescent and fluorescent lighting units. It covers materials, shielding and brightness, efficiency, acceptance criterion, auxiliary control equipment, ballast temperatures, construction, reflection factor, photometric performance, and other subjects.

▲ Mention Item NED-5391 when writing ▲

Roller Bearings

Roller Bearing Co. of America—Engineering data book and catalog covers entire line of products including small diameter roller series, bearing industry cam follower standard series, Cyclops roller follower series and cage type journal roller bearings.

▲ Mention Item NED-5392 when writing ▲

Sheet Metal Tools

Berkroy Products, Inc.—16-page illustrated booklet "Shake Hands with the Berkroy Line" describes and gives instructions for use of nibbler, brake, shear, slip roll and hand punch. Tools can be supplied singly or mounted on bench as unit for complete fabrication of sheet steel up to 20 gage and softer metals in correspondingly heavier gages.

▲ Mention Item NED-5393 when writing ▲

Lightning Protection

L. S. Brach Mfg. Corp.—16-page illustrated catalog No. 48-A presents information on complete line of lightning arresters and terminal facilities and accessories for low voltage power, radio transmitters, alarm, power supervision and other low voltage circuits where uninterrupted service is essential.

▲ Mention Item NED-5394 when writing ▲

Industrial Rubber Products

Thermoid Co.—Brief descriptions and illustrations of rubber belting and hose are presented in 8-page illustrated "Catalog Digest." Transmission, conveyor and elevator belting are covered; and hose types include steam, hydraulic, air, welding spray, water, acid, oil and gasoline, suction and materials handling.

▲ Mention Item NED-5395 when writing ▲

Link Type V-Belt

Manheim Mfg. & Belting Co.—24-page illustrated booklet "Veelos, the Link V-Belt" describes this belting which is adjustable to any length and adaptable to any drive in ¼ to 1000-horsepower range. Desired length of belt can be removed from stock reel and coupled ready for operation in a few minutes.

▲ Mention Item NED-5396 when writing ▲

Crushing & Grinding Machines

Nordberg Mfg. Co.—Two illustrated publications, Nos. 149 and 152, present information on machinery for processing ores and minerals; and grinding mills of ball, pebble, rod, tube and compartment types, respectively.

▲ Mention Item NED-5397 when writing ▲

Pressed Steel Detachable Chain

Chain Belt Co.—Complete specification and price lists are presented in 8-page illustrated bulletin No 48-26 for plain and attachment links of Rex pressed steel detachable chain. Chain is constructed in wide range of sizes of special analysis heat treated strip steel.

▲ Mention Item NED-5398 when writing ▲

Identification Products

Kaumagraph Co.—24-page illustrated brochure entitled "Kaumagraph Reports to Industry" depicts diversity of uses for dry transfers, Prestomark thermo-adhesive fabric labels, embossed seals and lithography to identify merchandise.

▲ Mention Item NED-5399 when writing ▲

Case No. 4*

THE BELT METHOD IS THE BETTER METHOD . . . AND THE BETTER BELT IS METALITE®

ELECTROPLATER CUTS COSTS 65%

Typical of the success of belt-backstand conversion is this operation—roughing and finishing cast-iron furnace grills prior to plating. Using a Porter-Cable ABS Backstand with Behr-Manning Heavy Duty Metalite Cloth Belts, the following production improvements were obtained: 1) Abrasive cost reduced 65.4%. 2) Production increased 26%. 3) Finish improved substantially. 4) Flatness held. 5) Subsequent plating failures reduced measurably.

Write for free demonstration.

* For the complete series of 7 Case Studies write for our 12-page booklet "Production Talks Backstands."

BEHR-MANNING • TROY, N. Y.
(DIVISION OF NORTON COMPANY)
QUALITY COATED ABRASIVES SINCE 1872

▲ Mention Item NED-5400 when writing ▲

NOW! Perfect Copies from old, worn originals!

Special Feature Smoothes Out Wrinkles, Creases

Ordinary reproduction methods frequently make imperfect, inaccurate copies of worn originals. But Hunter Photo-Copyist eliminates such defects.

Vacuum Seal Does It!

You lay your original and sensitized Hunter paper on ground glass. Close cover and turn on vacuum. This effects an absolutely perfect contact between the glass, original and cover. Smoothes out wrinkles and creases. No more fuzzy lines, but a sharp, clear, better-than-original print.

Other Advantages—You can make high-contrast "vandyke type" paper negatives from any tracings; either negative or positive copies from pencil drawings on layout paper; new tracings on linen from old, worn file tracings.

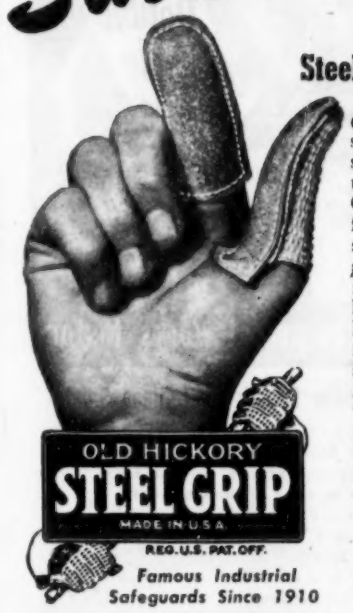
What's more, Hunter has 12 different Hecco-Dyzed Papers specially sensitized for all kinds of drawings, sketches, written and printed matter.

WRITE TODAY FOR FREE HUNTER BOOKLET

HUNTER PHOTO-COPYIST, INC.
131 Hunter Avenue, Syracuse, N. Y.

▲ Mention Item NED-5401 when writing ▲

Save Fingers with Steel-Grip Finger Guards



● Hundreds of factories save time and injuries and speed production by protecting workers with Steel-Grip Finger Guards. Used for handling rough or sharp articles, for buffing, grinding, sanding, polishing, punch press work and hundreds of other jobs. Protect fingers or thumb, front or back, from cuts, abrasions or blisters. Made of durable leather with elastic web back for snug, cool, comfortable fit. Easy on and off. Large medium or small sizes. Send 10c each for samples or trial order box of 50 at $4.25, less 10%. Catalog of Steel-Grip Safety Apparel free on request.

INDUSTRIAL GLOVES CO.

1522 GARFIELD BOULEVARD DANVILLE, ILLINOIS

(In Canada: Safety Supply Co., Toronto)

▲ Mention Item NED-5402 when writing ▲

OUT OUR WAY

SOL-SPEEDI-DRI assures you cleaner, brighter, safer floors . . . freedom from slips and falls caused by oil- and grease-soaked surfaces. In addition, SOL-SPEEDI-DRI costs *less* per pound because it does *more* work . . . because it is always efficient, always dependable.

WHEN YOU BUY, BE *SURE* IT'S SOL-SPEEDI-DRI!

SAFETY & MAINTENANCE CO., Inc., 1 Wall Street, New York 5, N.Y.

Warehouse stocks maintained in principal cities of the United States and Canada

SOL-SPEEDI-DRI

ABSORBENT FOR ALL LIQUIDS

▲ Mention Item NED-5403 when writing ▲

That's right—Blaw-Knox Clamshell Buckets come in hundreds of types and sizes. Catalog No. 2076 makes it easy for you to specify exactly the right bucket for any job—any crane capacity . . . Send for it today.

BLAW-KNOX DIVISION

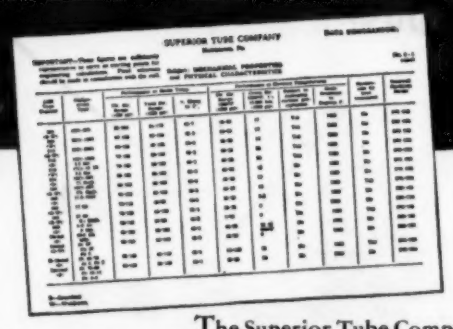
of Blaw-Knox Co.

2068 Farmers Bank Bldg., Pittsburgh, Pa.

BLAW-KNOX *Clamshell* BUCKETS

▲ Mention Item NED-5404 when writing ▲

FILEWORTHY, COMPARATIVE DATA



The Superior Tube Company has prepared a concise, easy reference chart covering the mechanical properties and physical characteristics of tubing produced in various Stainless Steels, Nickel and Nickel Alloys.

The chart shows the performance of the various metals at both room and elevated temperatures; ultimate strength, yield strength, creep strength and elongation, together with other pertinent information. These data figures given are sufficiently accurate to serve as starting points for engineering calculations.

As a leading producer of fine small tubing (⅝" O.D. Max.) we consider it a privilege to make available such information for designers and engineers—write for your copy of Data Memo No. 6.-1.

See our CATALOG in SWEET'S FILE

THE BIGGER NAME IN SMALL TUBING *Superior*

SUPERIOR TUBE COMPANY

2018 Germantown Ave., Norristown, Pennsylvania

For Superior tubing on the West Coast, call PACIFIC TUBE COMPANY, 5710 Smithway St., Los Angeles 22, Cal. ANgeles 2-2151

▲ Mention Item NED-5405 when writing ▲

New Literature—Continued

Contact Paper

Eastman Kodak Co.—Kodagraph contact paper for contact photocopying and engineering reproduction is subject of 8-page illustrated booklet. Paper can be used in any type of contact photocopying equipment and is supplied in all standard sizes of sheets and rolls in standard and extra thin weights.

▲ Mention Item NED-5406 when writing ▲

Brass Specialties

L. F. Grammes & Sons, Inc.—"Grammes Gifts for Business Men" is title of 16-page booklet depicting, describing and giving prices of brass articles suitable for use as gifts and sales aids.

▲ Mention Item NED-5407 when writing ▲

Hydraulic Presses & Machines

Hydraulic Press Mfg. Co.—"Quick Delivery" is title of 8-page illustrated stock list covering metalworking presses, diecasting machines, plastic molding machines, turbojectors for rubber molding, laboratory presses, hydraulic boosters, gear pumps, power units, and variable delivery radial hydraulic pumps.

▲ Mention Item NED-5408 when writing ▲

Grinding Oil

D. A. Stuart Oil Co.—20-page illustrated handbook "Grinding with Oil", revised edition, contains data on application of oils to precision grinding projects. Selecting proper oils and grinding wheels, wheel marking systems and standard wheel shapes are among subjects discussed.

▲ Mention Item NED-5409 when writing ▲

Abrasive Belt Machines & Electric Tools

Porter-Cable Machine Co.—20-page illustrated pocket-size "Miniature Catalog" describes large abrasive machine tools with automatic feed table, centerless belt grinder, tool room surfacers and bench type abrasive belt machines. Portable electric tools listed are saws, sanders, edgers and radial saws.

▲ Mention Item NED-5410 when writing ▲

Electronic Voltage Regulators

Sorensen & Co.—20-page illustrated catalog No. S-348 explains electronic control of voltages and currents and outlines its advantages in providing adjustable constant output voltage, precise regulation accuracies, excellent wave form, fast recovery time and insensitivity to line frequency fluctuations between 50 and 60 cycles.

▲ Mention Item NED-5411 when writing ▲

Electric Heating Units & Controls

Waage Electric, Inc.—16-page illustrated catalog No. 48 contains data and prices of strip, band, cartridge, immersion and tubular heaters; controls and switches; melting pots; soldering irons; vulcanizers; wax injection machines; industrial and laboratory stoves; electric branding irons and other electrical equipment.

▲ Mention Item NED-5412 when writing ▲

Electric Connectors

Cannon Electric Development Co.—32-page condensed catalog No. C-47 covers 13 types of multicontact electric connectors for radio, aircraft, communication and similar applications. Also included are direct-current solenoids and signal equipment, conduit fittings, fire alarm boxes and relays, cable terminals, grills and other equipment.

▲ Mention Item NED-5413 when writing ▲

Fixture Fittings

West Point Mfg. Co.—Dimensional drawings, tables of sizes and prices for wide variety of precision fixture parts and fittings are presented in 6-page bulletin No. P2. They are constructed of heat treated, cadmium plated steel.

▲ Mention Item NED-5414 when writing ▲

Rolling Doors

Kinnear Mfg. Co.—28-page illustrated catalog "Kinnear Rolling Doors" describes and depicts service type doors, fire doors and shutters, RoL-TOP doors, hangar doors, steel rolling grilles and special doors. They open upward, operate smoothly and clear all ground obstructions.

▲ Mention Item NED-5415 when writing ▲

Paper & Pulp Machinery

Allis-Chalmers Mfg. Co.—32-page illustrated booklet No. 25B6827 describes wide range of power generation, distribution, utilization and control equipment supplied to pulp and paper industry.

▲ Mention Item NED-5416 when writing ▲

COOLER belt means FASTER cutting!

PORTER-CABLE

BENCH BELT GRINDER

BBS Bench Grinder (table not included)

Eliminates wheel loading!

If you put a BBS alongside an ordinary abrasive wheel of the same width . . . you'd find that the BBS *Abrasive Belt has 4 times the cutting area.* It's no wonder many shops replace the old, built-up or loaded wheels with this amazingly fast BBS!

It grinds . . . surfaces . . . polishes

Does line contact for faster cutting . . . has platen for squaring, grinding flats, arcs, angles, etc. Generates radii. Bevels. Removes flashings. Does clean-up. Has 101 uses. *Increases production over ordinary wheel up to 200%.*

SPECS: BBS uses endless belt 2½" wide x 60" long, with 4500 SFPM. 1 HP motor. Resilient contact roll 7" in diam. x 2½" wide. Adaptable to grinding on all types of material.

WRITE TODAY for full description . . . or see the Porter-Cable BBS at your dealer's.

PORTER CABLE Machine Co.

1710-7 N. Salina St. Syracuse 8, N. Y.

▲ Mention Item NED-5417 when writing ▲

TODAY'S Big Drill Press VALUES Carry This Quality Proven Trade Mark

Atlas

● Whatever your needs for drill presses—tool room, laboratory maintenance, or production—there are none on the market today that excel these Atlas drills in precision, long wearing qualities, and low cost. Comparisons of specifications and production records prove it. The reasons why are easily appreciated. First, is the exclusive Atlas "floating drive" spindle design—with 4 deep grooved SKF bearings—that eliminates all belt pull or torque on the spindle. It assures smoother operation, particularly on deep holes, and reduces wear. Second, is the extra weight and massiveness of Atlas castings for extra solidness to minimize vibration. Ask your Atlas distributor to point out all of the Atlas operating features, or send for latest catalog.

(Prices F.O.B. Kalamazoo, less motors, subject to change without notice.)

ATLAS PRESS CO. 723 N. PITCHER ST. KALAMAZOO, MICHIGAN

▲ Mention Item NED-5418 when writing ▲

Precision **ROD CUTTING at High Speed**

with the New **DI-ACRO ROD PARTER**

This newest member of the DI-ACRO "DIE-LESS DUPLICATING" family of Machines brings you accuracy, speed, capacity range and ease of operation fully up to standards of DI-ACRO Benders, Brakes, Shears.

Do you require precision?—DI-ACRO Rod Parter holds tolerance to .001" on duplicated cuts. The ends are square, and roundness is maintained.

Do you want speed?—The Rod Parter exceeds output of other methods with equal accuracy, on rods and bars up to ⅜". Torrington Roller bearings incorporated in an exclusive multiple leverage arrangement provide remarkable ease of operation.

"PARTS OFF" MANY MATERIALS

All hot and cold rolled rods
Stainless steel
Chrome Molybdenum
Copper Brass
Aluminum Bi-metals
Many types of plastics
Fibre Rubber Wood

GET "DIE-LESS DUPLICATING" CATALOG! Shows parts produced without die expense by DI-ACRO Benders, Brakes, Shears, Rod Parters, Notchers, Punches.

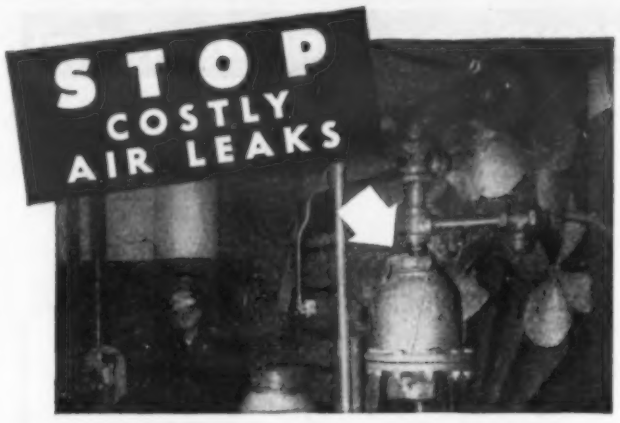
Pronounced "DIE-ACK-RO"

DI-ACRO PRECISION MACHINES DIE-LESS DUPLICATING

O'NEIL-IRWIN MFG. CO.

354 EIGHTH AVENUE • LAKE CITY, MINNESOTA

▲ Mention Item NED-5419 when writing ▲



In the average plant, compressed air costs 10 to 20 times as much as steam. With manual blowdown of water from separators, aftercoolers, etc., some air generally is wasted. And if the operator fails to close the valve tightly, the loss multiplies rapidly. To prevent such waste, hundreds of plants have installed Armstrong Air Traps at every point where blowdown of moisture is necessary. In addition to saving air, these traps set a standard for dependability that is only possible with high quality automatic equipment.
TRAPS TO FIT YOUR REQUIREMENTS. Armstrong offers ball float, "snap-action," and inverted bucket air traps . . . sizes to fit any job . . . forged steel body traps for high pressures. RECOMMENDATIONS. Quick facts on trap to use, how to install it, condensate rates, etc., contained in Bulletin No. 143 —ask for a copy. ARMSTRONG MACHINE WORKS, 819 Maple St., Three Rivers, Mich.

ARMSTRONG Air TRAPS

▲ Mention Item NED-5420 when writing ▲

the BEST in Quality tools!

take this SCREWDRIVER for example

Notice the square, fluted handle . . . it's made that way so you can get a good grip for more leverage. Pick it up . . . notice how comfortably it fits the hand, and it won't roll away when you lay it down.

The Durolite handle is non-conducting and plenty tough. The blade is forged from chrome alloy-steel, hollow ground, accurately tempered, polished and chrome plated for EXTRA protection.

Like other Duro-Chrome Tools, nothing is spared to make it the finest that money can buy. Each screwdriver has that instantly recognized Duro Quality.

DURO METAL PRODUCTS CO. 2649 North Kildare Avenue, Chicago 39, Illinois.

DURO TOOLS (HAND TOOL DIVISION)
The Mechanic's Best Friend
OVER A BILLION BUILT SINCE 1916
ALSO MAKERS OF DURO MACHINE TOOLS

▲ Mention Item NED-5421 when writing ▲

WRITE FOR NEW CATALOG SHOWING THE NEW COMPLETE FASCO LINE OF FRACTIONAL H. P. MOTORS

These FASCO quality-built motors are available in two and four pole models, rated for fan loads or power loads, for continuous or intermittent duty, with speeds from 1530 to 3075 Full Load R. P. M.

For NEW product design and sales advantages compare YOUR motor needs with the New FASCO F.H.P. Motors
SHADED POLE MOTORS 1/500 TO 1/8 H. P.

A PRODUCT OF FASCO F. A. SMITH MANUFACTURING CO., INC. 750 DAVIS ST. • ROCHESTER 2, N. Y.
FORMERLY Pilot MOTORS

▲ Mention Item NED-5422 when writing ▲

New Literature—Continued

High-Nickel Alloys

International Nickel Co.—36-page illustrated booklet "66 Practical Ideas for Metal Problems in Electrical Products" lists almost 100 cases showing how electrical manufacturers have used high-nickel alloys to overcome corrosion, heat, vibration fatigue, wear and other performance hazards.

▲ Mention Item NED-5423 when writing ▲

Stainless Steel Welding & Soldering

Armco Steel Corp.—52-page illustrated handbook "Welding and Soldering of ARMCO Stainless Steels" contains information on oxyacetylene, metal-arc, resistance, pressure, submerged arc and other methods of welding stainless steel. Soft soldering, silver brazing, riveting and oxygen-cutting of stainless steel are discussed also.

▲ Mention Item NED-5424 when writing ▲

Nonferrous Alloy Bars

Titan Metal Mfg. Co.—Rectangular and square bars made from eight different nonferrous alloys are covered in illustrated folder "Rectangular & Square Bars." Analyses of alloys, dimensional tolerances of various sizes of bars, and weight per foot of different sizes are enumerated.

▲ Mention Item NED-5425 when writing ▲

Fire Extinguishers

Ansul Chemical Co.—20-page illustrated catalog form No. 4845 describes hand and wheeled extinguishers using Plus-Fifty dry chemical which provides heat-shielding screen; is nontoxic; will not solidify, evaporate or deteriorate; is not affected by normal temperature extremes, winds or drafts and requires no periodic recharge.

▲ Mention Item NED-5426 when writing ▲

Portable Sanders

Sterling Tool Products Co.—Applications and operation of Sterling 1000 portable electric sander and Speed-Bloc portable air-driven sander are covered in 8-page illustrated brochure "Sterling Sanders." Information on complete sanding kits, and illustrations and prices of accessories are included.

▲ Mention Item NED-5427 when writing ▲

Glass Block

American Structural Products Co.—36-page illustrated booklet "Daylight in Industrial Buildings" discusses characteristics of Insulux glass block, its advantages from cost standpoint and methods of installation. Photographs show numerous installations in new and older industrial plants, mills, offices and other locations.

▲ Mention Item NED-5428 when writing ▲

Shipping Containers

General Box Co.—"The G. B. Container Album" is title of 12-page illustrated booklet depicting uses of wire-bound and all-bound boxes and crates, corrugated boxes, and cleated corrugated and stitched panel containers.

▲ Mention Item NED-5429 when writing ▲

Ion Exchange Materials

National Aluminate Corp.—Illustrated booklet contains information on ion exchange principles, as well as diagrams, formulas and illustrations of basic ion exchange reactions and typical uses. Data aid in accurately predicting exchanger performance under specific operating conditions and suggest new ion exchanger uses.

▲ Mention Item NED-5430 when writing ▲

Fastening Devices

Shakeproof Inc.—8-page illustrated booklet entitled "Fastening Suggestions" is descriptive of Sems-by-Shakeproof, mechanically preassembled combinations of lock washers and screws; U, J and latching type Speed Nuts; dome and dished type lock washers available with plain or toothed peripheries and precision stampings with built-in lock washers.

▲ Mention Item NED-5431 when writing ▲

Pressure Plugs

Standard Pressed Steel Co.—4-page illustrated folder No. 700 is descriptive of Unbrako pressure plugs which feature uniform taper, smooth fully-formed threads and perfect roundness. These precision plugs are designed for oil, water, steam, air and hydraulic pressure applications.

▲ Mention Item NED-5432 when writing ▲

Centrifugal Blowers

Bryant Heater Co., Industrial Div.—Illustrated bulletin No. 6A-4 describes complete line of lightweight Hi-Flo centrifugal blowers in 4 to 18-ounce pressure range with capacities from 6000 to 48,000 cubic feet per hour. Dimensions and application data are included.

▲ Mention Item NED-5433 when writing ▲

CUT MILLING COSTS with KEMPSMITH STANDARD ATTACHMENTS

CIRCULAR TABLE
Can Be Used on ANY Milling Machine

A Kempsmith Circular Table is a precision tool. Handles a large variety of jobs . . . milling circles, segments of circles, large cams and irregular contours. Ideal for gear cutting and high-speed continuous milling. Power feed and indexing attachment optional. Ask for Bulletin No. 106.

Kempsmith Standard Attachments broaden the scope of your milling machine . . . lower capital investment . . . save in set-up time.

KEMPSMITH MACHINE CO.
1841 SOUTH 71st STREET
MILWAUKEE 14, WIS., U.S.A.

KEMPSMITH ARBORS in all popular sizes or types. Adaptable to ANY make of milling machine with standardized spindle.

KEMPSMITH
Precision Built Milling Machines Since 1888

▲ Mention Item NED-5434 when writing ▲

SMOOTH GOING

NEW TORNADO FLOOR MACHINES

fast · thorough · quiet
do all types of floor maintenance work on any kind of floor.

scrub · polish · resurface
Easily handled, perfectly balanced, with the correct weight and pressure to clean thoroughly and effectively. Supplied in a variety of sizes and with attachments to cover a wide range of applications to exactly meet your requirements. Equipped with sturdy, splash-proof motor.

companion cleaners
When followed by TORNADO Vacuum Cleaner, scraps and moisture are removed and floor can safely be used at once.

WRITE FOR LITERATURE OR FREE DEMONSTRATION

BREUER ELECTRIC MFG. CO.
5098 Ravenswood Avenue
CHICAGO 40, ILLINOIS

▲ Mention Item NED-5435 when writing ▲

Typical of the countless applications for DRIV-LOK Pins—keying sprockets, gears, and machine members to shafts. Simply drill through hub and shaft; force pin into hole. No reaming or swaging necessary. Vibration proof.

Made in many types and sizes to fit your needs. Make assembling faster, easier, more economical. WRITE FOR CATALOG showing sizes and applications.

DRIV-LOK PIN COMPANY
717 Chauncey Street, Sycamore, Illinois

▲ Mention Item NED-5436 when writing ▲

It's NI-ROD...

for *machinable* welds in *cast iron*... for welds that won't break loose!

When you need *dependable* welds in cast iron... welds that won't pull apart under stress... make sure your electrodes are NI-ROD*!

Sales records show that *4 out of 5* customers re-order NI-ROD, once they have tried it. In welding shops all over the country, NI-ROD has become the *standard* electrode for welding cast iron and making welded joints between cast iron and steel.

Because it gives excellent fusion with minimum embrittlement, NI-ROD is widely used in high-stress applications such as cam surfaces, gear teeth, dies, cylinder blocks, machine frames.

And NI-ROD is easy to use, as well! It flows readily, needs no preheating, has a stable arc on both A.C. and D.C., and requires no special equipment or preparation.

Try NI-ROD *in your own shop at no cost. Just send your name and address and you'll receive 3 FREE sample electrodes.* Ask for any one of these diameters: 3/32", 1/8", 5/32", 3/16".

*Reg. U. S. Pat. Off.

THE INTERNATIONAL NICKEL COMPANY, INC.
69 Wall Street, New York 5, N. Y.

EMBLEM OF SERVICE INCO NI-ROD TRADE MARK

▲ Mention Item NED-5437 when writing ▲

EVERYTHING you want for engineering drawing reproduction...

THE BIG Kodagraph Autopositive Paper NEW PLUS

Provides unexcelled intermediates for quantity printing. Remarkable new photographic emulsion increases contrast in reproduction... gives dense black on pure white, durable, extra-thin base. Assures reproduction prints of exceptional legibility.

"Restores" old prints. Reproduces worn, faded, "unprintable" tracings. Prints from opaques and blueprints directly.

Reproduces in direct process, blueprint machines. Prints directly to positive. No negative step. Handles in ordinary roomlight. Normal photographic processing.

Stays flat. No curl. No wrinkle. No buckle. Easy to handle in processing, mailing, filing. Takes pen or pencil corrections readily.

Your local blueprint service will be glad to produce Kodagraph Autopositive intermediates and, if you wish, direct process prints or blueprints from them. Or your own reproduction department can make prints on Kodagraph Autopositive Paper.

For more information on this revolutionary new paper... information on the rest of the Kodagraph line... mail coupon at right.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

▲ Mention Item NED-5438 when writing ▲

New Literature—Continued

Metals & Metal Products

Continental-United Industries Co.—24-page illustrated brochure entitled "Metal for Industry" contains data on history of company and various divisions. Processing of metals and alloys; design and production of tools, dies and fixtures; fabrication of pipelines, and storage vessels; and weaving of metal cloth for wire screen are discussed.

▲ Mention Item NED-5439 when writing ▲

Tool & Die Accessories

Standard Machinery Co.—8-page illustrated catalog No. DA describes socket cap and set screws, pressure pad stripper and knock-out springs, hardened and ground dowel pins as well as compression and tension springs for jig and tool applications.

▲ Mention Item NED-5440 when writing ▲

Conveyor & Transmission Belting

Buckner Process Co.—6-page illustrated folder describes function and scope of Lion Paw conveyor and power transmission belting; safety matting; stair treads; brake linings; wrench, vise and check straps and slings.

▲ Mention Item NED-5441 when writing ▲

Centrifugal Pumps

Nagle Pumps—36-page illustrated bulletin No. 4711 presents information on line of horizontal and vertical shaft centrifugal pumps used in processes involving hot liquids and abrasive or heavily laden mixtures. Design, materials of construction and applications are covered.

▲ Mention Item NED-5442 when writing ▲

Paints & Coating Materials

Morton Chemical Co.—6-page folder describes line of Duramite chemically inert paints and coating materials which can be applied by brush, spray or dip and can be air-dried or baked. Line includes products for high and low temperature processing equipment, materials for maintenance painting in corrosive atmospheres, special finishes for masonry and concrete and chemical-resistant floor finishes.

▲ Mention Item NED-5443 when writing ▲

Chemical Materials

Hercules Powder Co.—20-page illustrated booklet entitled "Hercules Products" classifies all of company's chemicals by family groups as follows: cellulose, synthetic resins, rosin, terpene solvents and chemicals, chlorinated products, dairy products, and explosives and sporting powders. Chemical makeup, uses and potential applications of products are described briefly.

▲ Mention Item NED-5444 when writing ▲

Control Systems

Sarcotherm Controls, Inc.—20-page illustrated catalog entitled "Sarcotherm Weather Control" gives data on control systems for hot water and radiant heating. Thermostats, time switches, balancing fittings, air eliminators and hot water radiator valves are discussed.

▲ Mention Item NED-5445 when writing ▲

Wheel Spindle Bearings

Landis Tool Co.—12-page illustrated bulletin No. MB-48 explains basic fundamentals of Microsphere wheel spindle bearings for use in precision grinding equipment. Production, maintenance and operation of these steel-backed, centrifugally poured, babbitt lined bearings are discussed also.

▲ Mention Item NED-5446 when writing ▲

Gearmotors

Link-Belt Co.—16-page illustrated catalog No. 1815 covers double and triple reduction units with integrally mounted electric motor, in standard sizes of 1 to 30 horsepower and with output speed range of 280 to 6 revolutions per minute. Motors can be open, totally-enclosed, splashproof or explosionproof.

▲ Mention Item NED-5447 when writing ▲

Lighting Fixtures & Accessories

Mitchell Mfg. Co.—28-page illustrated pocket-sized catalog No. 325 gives complete specifications, price information and data on light fixtures and accessories for general or specialized commercial, industrial or residential lighting requirements.

▲ Mention Item NED-5448 when writing ▲

Punch Presses

Diamond Machine Tool Co.—12-page illustrated catalog contains descriptions, complete specifications and technical engineering data on open-back inclinable punch presses. Information describing how to calculate tonnage for punch press capacity to aid in selection of correct press for a given job is included.

▲ Mention Item NED-5449 when writing ▲

INCREASE YOUR PRODUCTION

INDUSTRIAL JIB CRANES

Faster, Safer Material Handling

Pillar Type Jib Cranes are designed to rotate 360 degrees and are built in various spans and heights in capacities up to 5 tons.

INDUSTRIAL EQUIPMENT CO.
327 N. ADA ST. CHICAGO 7, ILL.

Specialists in
MATERIAL HANDLING EQUIPMENT
CRANES—MONORAIL—RUNWAYS—GANTRYS—
ELECTRIC HOISTS—CHAIN HOISTS—AIR HOISTS—TROLLEYS

▲ Mention Item NED-5450 when writing ▲

Kodak

EVERYTHING you want for office photocopying...

THE BIG Kodagraph Contact Paper NEW PLUS

Brilliant reproduction. Gives rich, high contrast black-and-white negatives and positives on present equipment.

Handles easily. Has wide latitude... amazing uniformity. Gives operators wide safety margins. Same exposure, same development, sheet to sheet, package after package. Requires fewer trial exposures and remakes.

Resists curl. Prints stay smooth and flat. Tough, high quality Kodak-made paper assures long service in shop and office.

No new equipment needed. Nothing new to buy—except the paper... nothing new to learn. For full information about the new Kodagraph line—including details on Kodagraph Projection Papers—use coupon below.

EASTMAN KODAK COMPANY
Industrial Photographic Division, Rochester 4, N. Y.

MAIL COUPON FOR FREE KODAGRAPH BOOKLET

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Please send me a free copy of "The Big New Plus," telling the whole story on Kodagraph Reproduction Papers. I have direct process ☐ blueprint ☐ contact printer ☐ equipment.

Name_____ (please print)
Department_____
Company_____
Street_____
City_____ State_____

83

▲ Mention Item NED-5451 when writing ▲

WOLVERINE TRUFIN

Why is this called **TRUFIN?**

THE word "Trufin", which is the trade-mark of our Integral Finned Tube, is a contraction of "exTRUded" and "FIN". These words seem best to describe this unique tube because the fins are extruded right out of the tube wall and are thus a part of the tube itself.

With this construction the tube is capable of withstanding vibration and sudden heat changes.

Trufin possesses many times the surface area of plain tube. It will bend as readily as plain tube, and is available in a variety of diameters, alloys, fin heights and spacings.

If your product involves heat transfer, you should certainly acquaint yourself with Trufin to make sure you are not overlooking something that will bring you still greater efficiency.

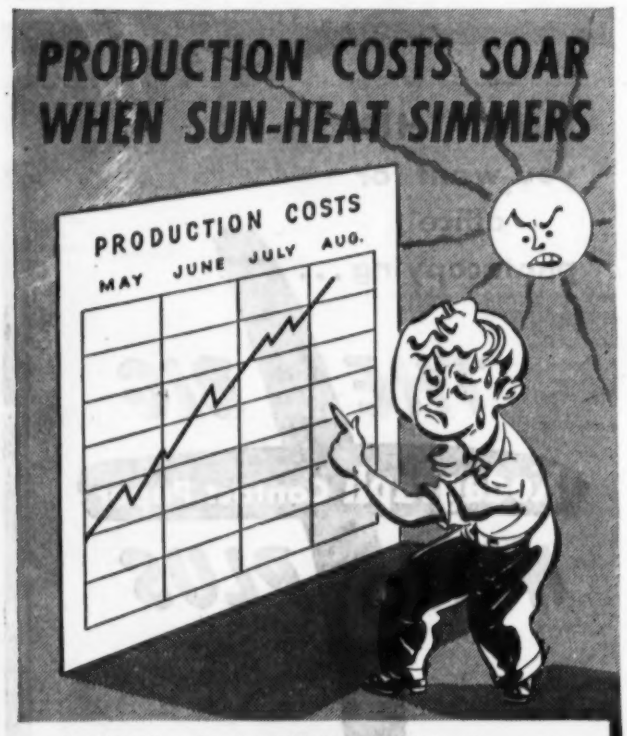
Let us send you Bulletin J-7 telling about the efficient use of Wolverine Trufin Tube.

WOLVERINE TUBE DIVISION
CALUMET AND HECLA CONSOLIDATED COPPER COMPANY
INCORPORATED

1911 CENTRAL AVENUE • DETROIT 9, MICHIGAN

▲ Mention Item NED-5452 when writing ▲

PRODUCTION COSTS SOAR WHEN SUN-HEAT SIMMERS



Maintain Peak Efficiency This Summer in Rooms Kept Cooler With

KOOLSHADE* SUN SCREEN

Only when working conditions are cooler and more comfortable can peak efficiency be maintained. Tests prove that rooms kept cool with KoolShade stay as much as 15° to 20° cooler—even on hottest days. The sun's rays are deflected before they strike the glass—up to 90% are blocked outside the window.

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REMEMBER THESE EXCLUSIVE FEATURES:

- Saves money on air conditioning—a smaller system does the job.
- Sweetens many a sour air conditioning system.
- Easy and inexpensive to install—will not rot, rust or rattle.
- Fits neatly and smoothly into modern architectural design.
- Durable bronze KoolShade also effective as insect screen.

Ingersoll KOOLSHADE* SUN SCREEN

*Trade Mark Property of
INGERSOLL STEEL DIVISION
BORG-WARNER CORPORATION

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Ingersoll Steel Division,
Borg-Warner Corp., Dept. G7
321 Plymouth Court, Chicago 4, Ill.

Please send free sample, literature, results of comparative tests and name of nearest KoolShade distributor.

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Company.....

Address.....

City..... State.....

PRODUCT OF BORG-WARNER

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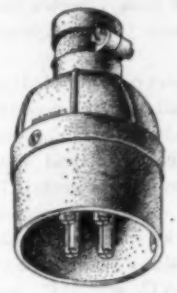
CANNON PLUGS



M1-4-22
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Listed as approved by Underwriters' Lab.
13/16 cable entry
$7.95 List

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30-amp. & 60-amp.

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Straight and 90° plug styles, and various receptacles: square surface, round flush wall, 2 gang flush and flush door, etc.

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SINCE 1915

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LUBRICATES ITSELF

MOTOR & PUMP in ONE integral unit . . .

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can be mounted on sides or base of machine, or suspended under table or frame.

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—That Pays for Itself!

SPEEDS UP PRODUCTION! You get fast action with Hannifin's new "Air Warden" regulator. No slow build-up to desired pressure. Saves time; helps do work faster.

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HANNIFIN AIR WARDEN REGULATOR

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DEMPSTER BROTHERS, Inc.
478 N. Knox St., Knoxville 17, Tenn.

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Protecto-Metal
Saves Time . . . Money . . . Labor for You

WITHOUT Protect-O-Metal, Spatter must be removed by grinding or chiseling.

WITH Protect-O-Metal Spatter wipes off quickly, easily—leaves surface clean.

NOW . . . You can cut welding clean-up time 90% by using inexpensive Protect-O-Metal. It's the NEW . . . BETTER way to make neater appearing welds. Does away with spatter. Leaves surface ready to paint. No grinding or chiseling with this patented compound used by leading fabricators everywhere. Unlike other compounds, POM has no smoke or odor. SIMPLE . . . QUICK . . . EASY to use. Just brush on and start to work. Protect-O-Metal improves the weld. Stabilizes arc and makes better fusion. So ECONOMICAL. Simply dilute one gallon with equal amount of water and get 3,000 feet of clean, quality welds. One-tenth of a cent per foot!

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For measuring to .0005" and less, *at-a-glance, anything* —from hardest metal to softest rubber!

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FEATURES: Automatic, uniform contact pressure—everyone gets the same speedy, accurate readings. Weight only 1½ ounces. Case thickness ¼". Dial 1⅝" dia. Fixed parallel contacts ¼ dia. Direct-reading count hand. Forged aluminum alloy case.

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B. C. AMES CO.
Mfr. of Micrometer Dial Gauges
Micrometer Dial Indicators
Representatives in principal cities

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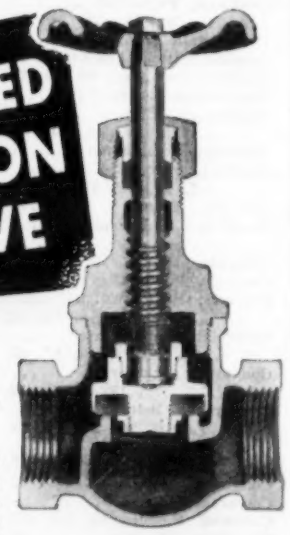
AN IMPROVED COMPOSITION DISC VALVE *for* LIGHT INDUSTRIAL SERVICE



O-B's improved Number 15 Composition Disc Globe Valve will give you all the features of a heavy duty valve on all your light maintenance and process services. The composition disc, available for both steam and water services, is easily replaced. A packing gland, with ample threading for complete compression of the packing, prevents any leakage around the stem.

The Number 15 Globe Valve is guaranteed for 125 lbs. W.S.P. and 200 lbs. Water, Oil or Gas pressures.

OHIO BRASS COMPANY, MANSFIELD 2, OHIO

2928-V

Ohio Brass VALVES

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BATTERY-CHARGING ECONOMY for your INDUSTRIAL TRUCKS with the HERTNER

MOTOR-GENERATOR
Model "K-1"
Charging Unit

With the Hertner Type "K-1" Motor-Generator Single Circuit Charging Unit for electric industrial truck batteries no current is wasted during the charging period since charging resistors are not used when charging.

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Control Panel

Fully Automatic

1. Automatic control of charge rate in accordance with Battery Manufacturer's recommendations.
2. Automatic cut-off and shut-down of motor-generator when battery is fully charged.
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4. Automatic protection against reversal of current.
5. Overload protection to both motor and generator.

Write for Bulletin 104 describing Hertner Model "K-1" Single-Battery Charger. Multiple chargers for all types of batteries are also available. For details, send us your requirements.

THE HERTNER ELECTRIC COMPANY
A General Precision Equipment Corporation Subsidiary
Motors • Motor Generators • Generator Sets
12752 ELMWOOD AVENUE • CLEVELAND 11, OHIO
Representatives in principal cities throughout the world

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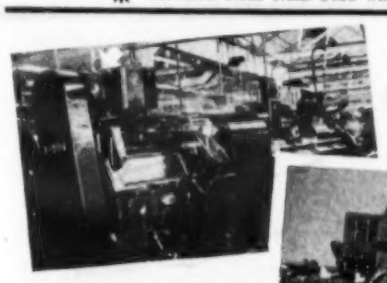

20 horsepower Century Squirrel Cage motor driving an automatic screw machine

10 horsepower Century Squirrel Cage motor driving an abrasive cut-off machine

CENTURY MOTORS

Deliver Dependable Power

No Matter What the Job!

Throughout their wide range of types and sizes Century motors are ruggedly built. Rigid frames, accurately machined feet, large shafts, accurate alignments, adequate ventilation system and good mechanical and electrical balance—all contribute to their outstanding performance.

Century builds a complete line of fractional and integral horsepower motors to meet the requirements of industrial production, processing, commercial and appliance needs.

Specify Century motors for all your electric power requirements.

CENTURY ELECTRIC COMPANY
1806 Pine Street, St. Louis 3, Missouri
Offices and Stock Points in Principal Cities

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Have you tried the PYROLANCE...

the modern portable FOUNDRY PYROMETER?

• Wherever non-ferrous metal is cast, the Pyrolance can mean real improvemen in quality! Simple, ruggedly built, this portable lance-type pyrometer makes temperature reading a quick and accurate operation. Enclosed thermocouple gives true temperature at lance tip—below surface of molten metal. Types for a variety of metals and temperatures up to 2300°F. Low in cost, available immediately. Write for Bulletin 1724. Illinois Testing Laboratories, Inc., Rm. 529, 420 N. La Salle Street, Chicago 10, Illinois.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

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DON'T TRUST YOUR IMAGINATION

Imagine doing the toughest job with an electric tool without receiving any kick or twist—imagine the motor continuing to run without burning out when the spindle is stalled completely—imagine cutting nut running time 90%—imagine one tool doing all the operations listed below.

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AMAZING all-purpose ELECTRIC TOOL will

- Drill up to ¼"
- Ream up to ½"
- Tap up to ½"
- Run Nuts up to ⅜"
- Drive Screws up to ⅜"
- Hole Saw up to 1½"
- Bore Wood up to 29/32"
- Drive Studs up to ⅜"
- Drill Masonry up to ⅜"
- Extract Broken Studs up to ⅜"
- Wire Brush up to ⅜" dia. shanks.

(Uses Standard Attachments)
(110 V or 220 V Models available)

Ingersoll-Rand
26540 11 Broadway, New York 4, N.Y.

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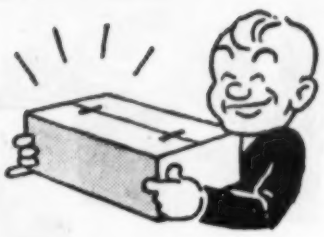
BE PROUD OF YOUR SHIPMENTS



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Since 1938
HAVERTOWN 2, PENNA.
Distributors in all Principal Cities

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USED & RECONDITIONED EQUIPMENT

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36" Bullard "New Era" Turret Lathes
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14" x 16" x 72" G&L Surface Grinder, late type
12" Fosdick Single Spindle Drill, late type
16" x 10" Reed-Prentice Lathe, late type
48" x 8' Ctrs. American Geared Head Lathe, M.D.
#2 Van Norman Plain Miller, late type
#2 & #5 Cincinnati Plain Millers
#5 Cincinnati Plain Miller (New)
#2H Milwaukee Vertical Miller, late type
24" Gemco Production Shaper (New)
20", 24" & 28" G&E Shapers, M.D.
#3 Warner & Swasey Turret Lathe, late type
#5 Gisholt Turret Lathe, late type
#3L Gisholt Turret Lathe, late type
18 x 8 American geared Head Lathe
#1 Acme Fully Univ. Turret Lathe
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42" x 36" x 18' American Planer, 4 heads
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Main Office

Cleveland 13, Ohio ..... Penton Building

Advertising Representatives

F. O. Rice & Lloyd H. Weber — Penton Building, Cleveland 13
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New Equipment Digest is published monthly by Equipment Digest Publishing Co., Penton Building, Cleveland, Ohio; G. O. Hays, President; J. R. Dawley, F. O. Rice, J. H. Robison, Vice Presidents; E. L. Shaner, Treasurer; E. L. Werner, Secretary

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Circulation Audited by CCA

July, 1948

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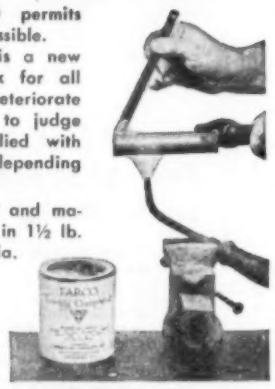

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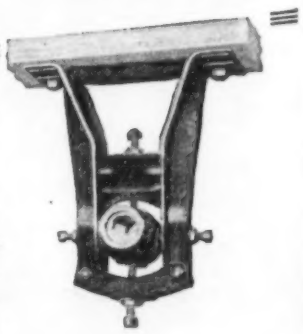

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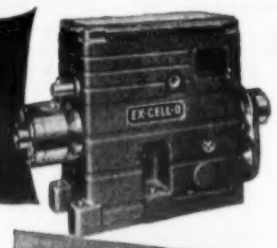

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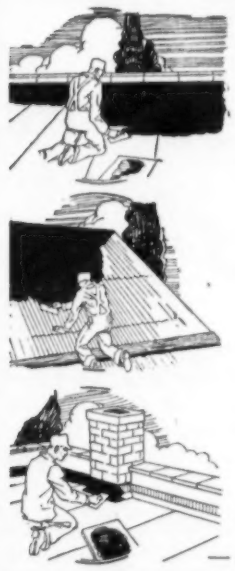

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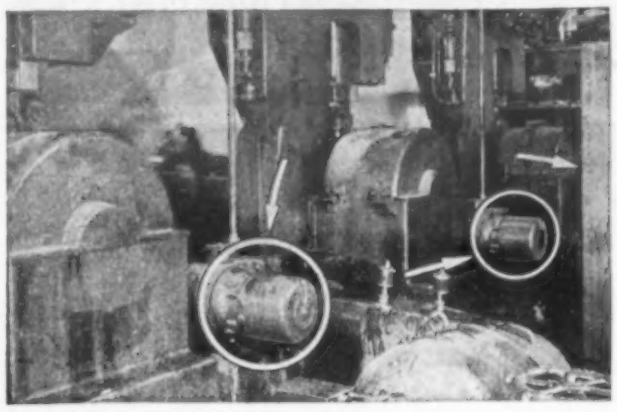

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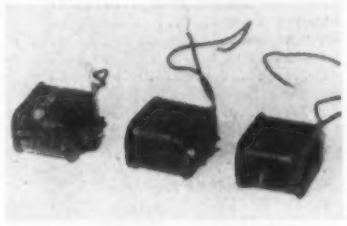

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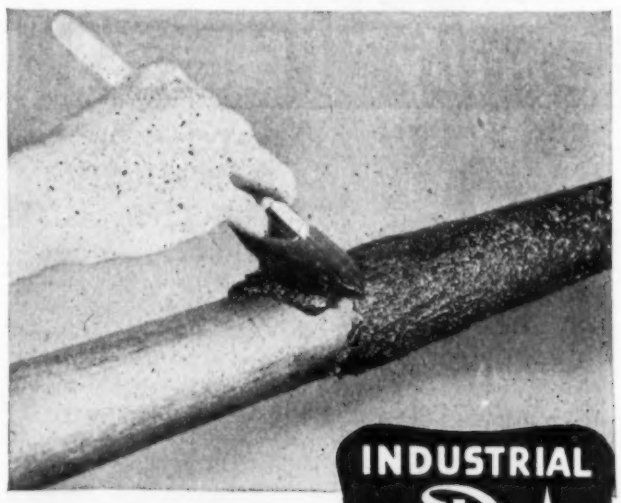

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COVER PIPES TANKS, WALLS

Anyone can brush, trowel or spray NoDrip on any clean, dry surface. Goes on like plaster, forms a seamless, protective coating, *STOPS CONDENSATION DRIP.*

NoDrip keeps equipment and floors safe and dry; prevents corrosion of metal and prolongs its life. Acid, alkali and brine resistant. Comes in 1, 5 and 55 gal. drums, ready for use.

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REDUCE FATIGUE
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FOR BROKEN Concrete or Wood Floors

Makes Durable Patch or Complete Overlay

Resurface or patch broken concrete floors with tough RUGGED-WEAR resurfacer. Here's a material which will stand up under the most punishing traffic conditions. Simple to install—no chopping or chipping required. Merely sweep out the spot to be repaired—mix the material—trowel it on. Holds solid and tight right up to irregular edge of old concrete. Provides a firmer, tougher, smoother, more rugged wearing surface. Used indoors or out. Dries fast.

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